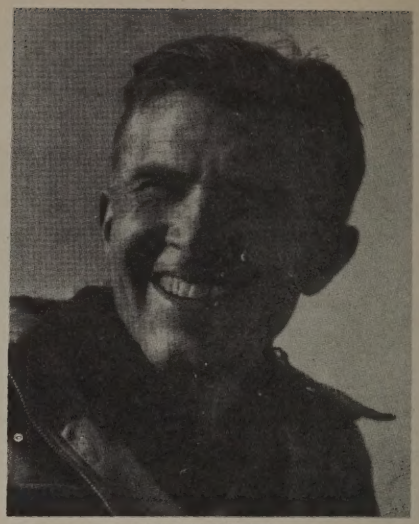
THE POLAR TIMES

"Neny Fjord, Palmerland" LELAND CURTIS

"*Epic Moment*" LELAND CURTIS



LELAND CURTIS

An Artist South of the Southern Cross

Leland Curtis is one of the few men who have seen the remote and austere stretches of the circumpolar continent of Antarctica. Appointed official artist of the 1939-1940 United States Antarctic Expedition because of his special fitness for the project, due to years of painting the glaciers and snow-capped peaks of California's High Sierra, it was his destiny to put on canvas for other men to see the strange and weird beauties of that glistening, ice-locked continent where great mountain peaks jut through gleaming glaciers into a starlit sky.

Leland Curtis has painted towering icebergs against the purple of far-southern seas; the formidable wall of the Ross Barrier where it rises sheer and vertical two hundred feet out of the depths of the Antarctic Ocean; the majestic peaks of Palmerland; the sixty-seven-year-old Bear, last survivor of thirty-three ships built for Arctic service, as she cautiously felt her way through the intricacies of narrowing patterns of water in the great ice pack. He has painted the more intimate things, close-up abstract formations in the ice caves of Little America, the expedition huskies, and those curious seasonal tourists, the Emperor Penguins of Palmerland, Marie Byrd Land and Little America.

Leland Curtis has recorded with fidelity the changing scene of the expedition from the first bergs sighted to the most distant peak the eyes of men have ever beheld in Alexander Land. These paintings convey in an impressive way the feeling of the age-old silence of Antarctica, a silence broken only at long intervals by the disintegration of the great ice barrier as it cascades into the ocean, by the cry of an Emperor Penguin, or every decade or so by the incongruous whistle of an expedition ship. These are paintings which satisfy the longing in men's souls for strange adventure in distant climes. They are paintings that embody something of the vastness, the remoteness and the majesty of a primordial continent.

Ruth Hatfield.

"*Antarctic Nocturne*" LELAND CURTIS

The Polar Times

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South Pole as U. S. Bastion Aim of Big Navy Expedition

By ANTHONY LEVIERO
THE NEW YORK TIMES.

WASHINGTON, Nov. 12—Rear Admiral Richard E. Byrd will be in charge of the large expedition that will renew the United States' stake and aspirations in the rich but forbidding Antarctic continent, it was confirmed today.

Admiral Byrd, who has flown planes to both poles, and Vice Admiral Forrest P. Sherman, Deputy Chief of Naval Operations, announced the expedition at a news conference.

They said the operation, involving 4,000 officers and enlisted men and more than a dozen vessels, was designed to train personnel and equipment in frigid zones. They added that the expedition would consolidate and develop the results of the American expedition of 1939-41 and amplify scientific data.

The emphasis that the two officials gave to the routine training nature of an operation in a far from routine area of the earth served to highlight the larger implications and aims of the venture. From reliable sources it was learned that these aims were:

(1) To determine whether the southern polar area had any value to national defense and long-term United States economy.

(2) To strengthen this country's claims, never formally asserted, to Antarctic areas.

As announced by the Navy, objectives of the expedition are:

1. Training personnel and testing equipment in frigid zones.

2. Consolidating and developing the results of the United States Antarctic Service Expedition of 1939-1941 (headed by Admiral Byrd).

3. Developing naval techniques for establishing, supporting and using bases under capable conditions.

4. Amplifying knowledge of the area with respect to hydrographic, geographic, geological, metorological and electro-magnetic conditions.

The admirals declined several times to answer questions that skirted the field of foreign relations. It was obvious they wished to avoid pitfalls that might lead to a situation like that created by Henry A. Wallace, former Secretary of Commerce, when he differed with the Administration on its attitude toward Russia.

Admiral Byrd emphatically denied that the expedition, which he said had been in preparation for months, was our entry in a race for hegemony on the icy continent. His denial alluded to a Washington dispatch last week of the North American Newspaper Alliance that said there was a "race" for strategic control of Antarctica.

As reporters questioned him, however, the explorer acknowledged that the British had had an expedition in his old base at Marguerite Bay since 1942, that the Russians had announced they were sending an expedition and that the Norwegians were also headed south of the southern hemisphere.

British Stake Claim

Admiral Byrd was asked why the British had sent an expedition, in the middle of the war, to the remotest area on earth. He refused a reply. Inquiry in other quarters established that the answer would have had international implications of a disturbing nature. It was then learned authoritatively that the British had established what was regarded as at least token colonization, apparently around Marguerite Bay.

Asked whether the British had taken over Marguerite Bay, Admiral Byrd replied that the new expedition did not involve that part of his former bases; that it was headed for his Little America base, 1,500 miles to the west.

He understands, he explained, that about two years ago the British "went down there and put down three or four bases."

Members of that expedition inquired what should be done with Admiral Byrd's equipment at the base. "We told them we want to leave it there," he said he had responded.

The explorer said he did not know whether the British were still occupying the old base, but "it they want to, they may do so."

Cooperation With British Pledged

Admiral Byrd said the American expedition would cooperate with the British if they were encountered.

This cooperation will also extend to another expedition, fostered by the American Antarctic Association and the American Geographical Society, that is going to Marguerite Bay. This group is headed by Finn Ronne, a naval reserve commander, as a private citizen. As a reservist, however, he will receive material assistance and moral support from the Navy.

Carrier in Antarctic To Launch Airliners

By The United Press.

WASHINGTON, Nov. 26—The Navy plans to fly twin-engine transport planes the size of commercial airliners off the deck of an aircraft carrier during Rear Admiral Richard E. Byrd's forthcoming Antarctic expedition, it was learned tonight.

The planes to be used in the unprecedented test are known commercially as DC-3's. They are being prepared at the Quonset Point, R. I., Naval Air Station.

As planned by air officers assigned to Admiral Byrd's staff, six of the transports will be taken to a point about 100 miles off the Ross ice shelf near Little America on the 27,000-ton aircraft carrier Philippines Sea.

They will be shot off the carrier's deck with the assistance of jato-jet power bottles fixed to their wings. A landing strip will be prepared for them at Little America by ships and men assigned to the expedition's central task group.

Any effect the Byrd expedition might have on the balance of conflicting claims of Antarctic territory would be merely incidental, the admiral said. He added:

"This nation doesn't recognize any claims down there and hasn't made any claims."

The expedition will carry the most extensive aerial mapping of the South Pole region that has ever been made.

It will be a highly mechanized operation, utilizing considerable equipment developed in the war. Planes criss-crossing the icy wastes will prospect for minerals with highly sensitive electronic devices used for submarine detection in the war.

Asked whether the expedition would seek uranium, now a critical metal used in the atomic bomb, Admiral Byrd said that explorations would be made for all metals and that uranium was one of them.

To a question whether atomic physicists would be in the expedition, Rear Admiral P. F. Lee, director of Naval Research, replied that there would be physicists, but not "atomic physicists."

Admiral Byrd said he believed the Antarctic Continent was a reservoir of untouched resources, and "naturally there is an interest from that standpoint."

Leaving early next month, the expedition would arrive early in January to take advantage of the polar summer, and leave by the end of February, when the polar winter begins. The polar task force will consist of three main groups. They will sail from Norfolk, Va.; San Diego, Calif., and San Pedro, Calif.

The central group will encompass the flag ship and headquarters communication ship, the Mount Olympus; the Coast Guard icebreaker Northwind, the Navy icebreaker Burton Island, the cargo ships Yancey and Merrick and a submarine of the latest type, the Sennet

The commander of the task force under Admiral Byrd will be Capt. Richard H. Cruzen of Gallatin, Mo., who served as second in command to the Byrd expedition of 1939-41.

The east group, commanded by Capt. George F. Dufek of Rockford, Ill., a naval aviator and a member of the earlier Byrd expedition, will include the seaplane tender Pine Island, the oiler Canisteo and the destroyer Brownson.

The third, or west, group of the expedition will be commanded by Capt. Charles A. Bond of Arlington, Va., and Philadelphia. It will include the seaplane tender Currituck, the oiler Cacapon and the destroyer Henderson. A naval aviator, Captain Bond is a veteran of the Aleutian campaign.

Carrier to Launch Planes

After a base has been set up on the Ross Ice Shelf, the aircraft carrier Philippine Sea will launch aircraft for shore-based flight operations.

A base capable of supporting a small party for eighteen months will be established for possible emergencies.

The Army will have eight or ten representatives in the expedition, which will include a scientific staff of 300, including twenty-five civilian scientists and thirty-five Navy civilian scientists.

The Weather Bureau, Coast and Geodetic Survey, Coast Guard, United States Geological Service, Hydrographic Office, other Government scientific agencies and about fifty marines, including aviators, will go along.

Eight to twelve newspaper men will be in the expedition.

Admirals Byrd and Sherman said the 4,000 Navy men of the expedition were not volunteers. They were ordered to go and are going cheerfully, the officers added.

The submarine Sennet was expected to contribute materially to oceanographic research because of its sensitive fathometers and bathythermographs. It as well as the destroyers should provide additional safeguards for over-water operational flights.

Each of the large seaplane tenders, the Pine Island and Currituck, will carry three camera-equipped Martine Mariner patrol seaplanes, a small scout plane and two helicopters. The icebreakers, modern ships using primarily steam and suction rather than a battering edge, will carry one scout seaplane and one helicopter each.

There will be sled dogs, but Admiral Byrd said they would be used mostly in difficult areas. Mechanized equipment would be the major means of travel.

Navy Loading Ships for Trip Into Antarctic

Tailor's Fit of Every Man in Expedition Is Sought; Food To Be Normal Type

WASHINGTON, Nov. 24 (AP).—The Navy's Antarctic expedition already is loading its ships at two ports for a direct journey to the Polar regions.

Captain M. A. Norcross, logistics (supply) chief for the expedition, said today the multitude of gear needed for the biggest Polar expedition is going into the holds of ships at naval bases in Port Hueneme, Calif., and Norfalk, Va.

Captain Norcross and his staff experts will have to guess right the first time as to what supplies will be needed. There will be no resupply once the ships have left the United States.

Even the single matter of clothing is no simple problem. Captain Norcross said an effort is being made to get a rough tailor's measurement of every man in the expedition in order that the Polar clothing will fit.

Fit is important because there must be air space between successive layers of clothes if they are to provide maximum protection against temperatures ranging down to 90 degree below zero.

Each ship will be self-sustaining, carrying its own supplies. Two cargo vessels will carry supplies for a base camp. Two big fleet tankers wil have fuel to supply the ships and aircraft in the Antarctic and get them back home.

Most of the 4,000 men of the expedition will live aboard the thirteen ships, with the vessels anchored close in-shore, but a 300-man base camp will be established, probably on the Ross Ice Shelf. The camp will be primarily for support of air operations.

Captain Norcross said normal-type foods—including meats, butter and other supplies usually carried by Navy ships—will be used and there will be a fair percentage of dehydrated foods. Emergency rations will be taken along for use by parties operating on the ice. These will include the time-tried friend of all polar explorers, pemmican.

Because there will be no ships from the outside world going to Little America, the men of the expedition may not be able to send or receive any mail for the four months they are away.

Only radio contact will be possible unless the scheduled trip of an aircraft carrier to the expedition some time in January brings mail. Long over-water hops through the world's worst weather probably will preclude the use of airplanes to connect with the expedition.

Navy Trains Dogs For Polar Trek

WONALANCET, N.H., Nov. 23—(A.P.)—The United States Navy is getting its dogs ready for Admiral Richard E. Byrd's task force trip to the Antartic—using motor-less automobiles in lieu of sleds during their training.

In "Chinook Village" an assortment of Siberian, Esquimo and Alaskan malamute dogs go through their rigorous training day after day, getting in trim for the job ahead.

Two navy men are getting special training in handling the animals.

Two little English automobiles, with engines removed, serve as sleds in the daily hauls laid out for dogs and men.

U. S. To Hunt Coal, Copper, Uranium

By the Associated Press.

WASHINGTON, Nov. 22.—Scientists of the Navy's South Pole expedition said today their surveys will seek a treasure chest of minerals the continent of Antarctica is believed to be hiding under a cap of snow and ice.

They hope to learn whether it contained such rare minerals as uranium, used for atomic energy, as well as get more information about huge coal and copper deposits, which are believed to exist.

The surveys will be in charge of J. R. Balsley, airborne geophysicist for the United States Geological Survey. New survey instruments will permit studies to be made of many times as much territory by plane as would be possible on the surface, where travel is by dog teams.

Adm. Richard E. Byrd, polar explorer in charge of the Navy expedition, said Antarctica appears to be rich in minerals.

GETS ANTARCTIC TASK

B. C. Haynes, Weather Expert, to Go With Byrd for Studies

WASHINGTON, Nov. 20—The Department of Commerce has assigned B. C. Haynes, chief of the Weather Bureau's Observation Section, to join the Navy's Antarctic Expedition as an official observer.

Mr. Haynes will study meteorological operational problems, particularly the use of radar, radio wind-finding equipment and airplane weather reconnaissance. He will also survey the feasibility of establishing automatic weather stations there.

Lieut. Charles A. Schone and C. E. Westerman of the Coast and Geodetic Survey will also represent the Commerce Department as magnetic observers.

The Weather Bureau is interested in the effect of large Southern Hemisphere air masses originating in the Antarctic, on Northern Hemisphere weather.

Pole-Visiting Submarine to See What Torpedoes Do to 'Bergs

ABOARD THE U. S. S. MOUNT OLYMPUS, Dec. 13 (AP)—The submarine Sennett, the air-conditioned icebox of the Navy's South Polar expedition, is going to dive under the ice and toss torpedoes and gunfire at a couple of icebergs of the Ross Sea ice shelf to see what happens.

The "sub's" skipper, Commander Joseph B. Icenhower, of Parkersburg, W. Va., doesn't think they will do much damage to the icebergs. Icebergs can be pushed with a loss of blast force, but since the ice shelf is a fixed barrier it might be more affected.

Firing two torpedoes plus five-inch and 40-millimeter deck guns is only part of the task for the eager volunteer crew of 10 officers and 72 men packed into the 311-foot vessel for the coldest, longest and roughest submarine voyage.

Another is to make a run under the ice pack edge to study its thickness and shape. The submarine also is charting the ocean bottom by depth soundings and will collect samples of microscopic water life.

The Sennett may stay in Little America for only a few weeks, but it still will be a 75-day trip or the longest single submarine run.

It took on so many supplies at Panama that the base there talked of "Operation Hi Jack." There are potatoes stored even in one torpedo tube, said Chief Commissary Steward Clement Dalton of Alton, Ill.

Edward McNair, Seamen, First Class, of Savannah, Ga., the officers' cook, said stores include plenty of soup, vitamins, fresh fruit, and a Christmas tree.

Chief Electrician's Mate Henry Brengelman of Hammonton, N. J., who served on the Sennett in wartime, said "I wouldn't swap this chance for anything."

Sled Dogs and Airplanes Loaded on Byrd Ships

NORFOLK, Va., Nov. 29 (AP).—Old and new extremes in modes of polar transportation—sled dogs and airplanes—are being loaded here aboard ships of the Byrd expedition, which will sail Monday for the Antarctic.

Aboard the group command ship, Mt. Olympus, Rear Admiral Richard E. Byrd's flagship, are twenty-seven huskies, plus five pups, whelped since the sled dogs were rounded up in Labrador, Quebec and New England.

Three patrol bombers, two helicopters and a scout observation plane have been loaded aboard the seaplane tender Pine Island, and one helicopter and one Gruman amphibian aboard the Coast Guard icebreaker North Wind. Other ships sailing from Norfolk are the destroyer Brownson and the oiler Canisteo.

Navy Liquor Ban in Force for Antarctic Expedition

WASHINGTON, Nov. 29 (AP).—The supply section of the Navy's Antarctic expedition says it will be a dry affair—no liquor, no beer.

The reason: Navy reuglations prohibit the serving or use of intoxicants aboard Navy ships, although they may be transported on such ships. Plans for the shore base at Little America include no provisions for a bar.

At Norfolk a spokesman for the Byrd expedition announced today that Rear Admiral Richard A. Cruzen, task force commander, has directed a court martial for any personnel bringing liquor aboard any of the ships in the force. He explained that it was contrary to Navy regulations and said that each ship probably will carry a small quantity of liquor to be dispensed by the medical officer for medicinal purposes only.

ABOARD THE U.S.S. MOUNT OLYMPUS, Norfolk, Va., Dec. 1—On the forecastle a Norduyn skiplane is bolted to a special platform. Elsewhere there are stacked sleds and great creosoted logs, which are to be frozen in as moorings alongside the ice shelf. Small, flat-bottomed skiffs also rest on the deck, a far cry from, the admirals' barges that usually scoot between ships of a task force.

A coal shortage in Little America would be fatal. Wooden bins have been erected on the battle-gray decks and filled with bags of soft coal.

The entire loading plan is reminiscent of the Pacific invasions. All the equipment for construction of the airfield is aboard an attack cargo ship in the Central Group. Vast quantities of supplies are being brought along.

"Morale" Items Plentiful

On this ship, for example, eight months' dry provisions have been stocked as well as "morale" items in bulk. Sixteen thousand pounds of coffee, a Navy "must," have been provided for the crew of 600, and 150,000 packages of cigarettes and thirty-five moving pictures are aboard for the five lonely months of the trip. After the first month fresh vegetables will have been exhausted and the cooks will begin to wield can-openers.

The exploration will continue as long as winter in the Southern Hemisphere permits, but it is expected that the ships will have to push their way out of the ice pack by the end of March.

Twenty-two civilian scientists are in the ships of the three groups. Seven are in this vessel. Eleven press, radio and magazine correspondents are also aboard. Besides the Navy, the Coast Guard, the Army and other Government services will be represented. About 4,000 men are on the expedition roster. A number of veteran explorers who accompanied Admiral Byrd on previous expeditions are going along.

NAVY SHIPS START FOR THE ANTARCTIC

Cruzon, Task Force Chief, Tells of Ross Sea Plans—Swimmers Go Along to Blow Up Ice

By WALTER S. SULLIVAN
THE NEW YORK TIMES.

ABOARD THE U. S. S. MOUNT OLYMPUS, at Sea, Dec. 2—Eight ships of the United States Navy sailed into the Atlantic and Pacific today, starting a vast expedition that Rear Admiral Richard E. Byrd said before the sailing would probably explore half of the unknown portion of Antarctica.

This area, never before sighted by man, constitutes the greater part of the South Polar continent and is almost equal to the area of the United States and Mexico combined. The expedition would explore 2,000,000 square milles from the air.

Under the plan, thoroughness would be sacrificed for extent; thus only the major topographical features of this region would become known—where the great mountain ranges wander and end, where the sea penetrates under the ice cap and where land contours indicate possible mineral deposits. All these features are at present unknown over most of Antarctica.

After lunching aboard this flagship with Rear Admiral Richard H. Cruzen, operational commander of the thirteen ships that are to be in the expedition, Admiral Byrd returned ashore just before the gangplank was hoisted. He said he planned to join the expedition in Little America late in January, riding down on either the aircraft carrier Philippine Sea or the icebreaker Burton Island. Admiral Byrd is in overall charge of the Antarctic Developments Project 1947, known also as Operation High Jump.

West Coast Ship Also Off

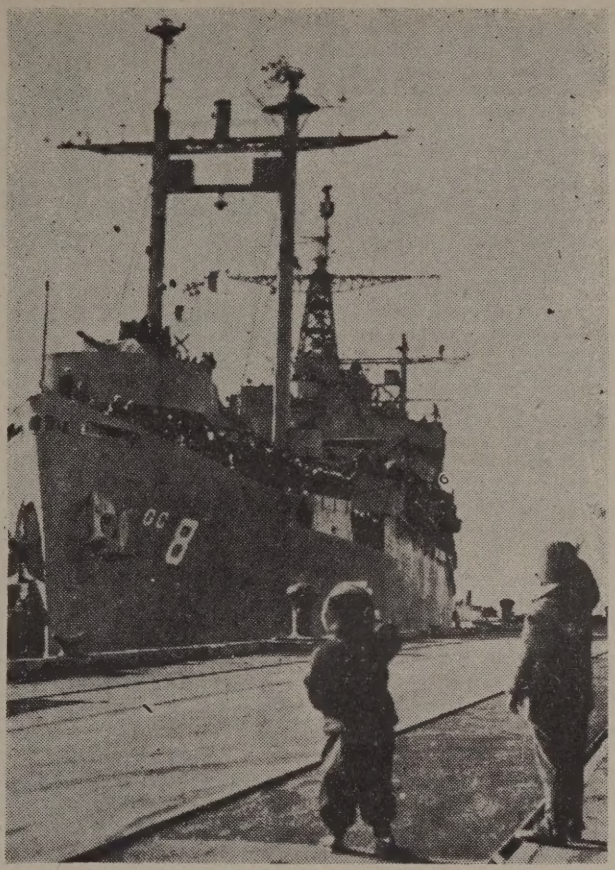
In a freezing wind that blew up white caps, the Mount Olympus followed the seaplane tender Pine Island and the icebreaker North Wind out of the twenty-mile channel to the open sea. The destroyer Brownson brought up the rear.

At the same time four ships of the expedition sailed from San Diego and Port Hueneme, Calif. From Port Hueneme, north of Los Angeles, went the cargo ship Yancey, which carried a detachment of Seabees. Another group of Seabees will sail aboard the cargo ship Merrick from Port Hueneme in three or four days. As they did so often on tropical Pacific Islands, these Seabees will construct an airfield, only this time it will be on the Ross ice shelf of Antarctica.

The ships that put out from San Diego are the seaplane tender Currituck, the oiler Cacapon and the destroyer Henderson.

Off Old Point Comfort, Navy planes winged overhead in formation and messages of greeting flashed from ships on all sides, "Good Luck!"

VANGUARD OF ANTARCTIC EXPEDITION SAILS



Dorothy and Charles Perkins waving good-bye to their father, Jack E. Perkins, biologist, as he left from Norfolk, Va., on the U. S. S. Mount Olympus

Past Cape Henry the expedition ships turned south on their 10,000-mile voyage to the polar regions.

At a press conference before sailing Admiral Cruzen said that he believed that surveying planes from the airfield built on the Ross ice shelf could easily fly over the South Pole. These planes, twin-engined Douglas transports, will be able to fly in excess of ten hours because of their additional fuel tanks. They will be flown off the great Essex-class carrier Philippine Sea at a point north of the ice pack, perhaps 300 miles from Little America and the airfield, in late January.

At the same time the North Wind will fight her way back out through the ice pack to go alongside the carrier. The icebreaker will take on mail and additional equipment to ferry them to Little America.

Admiral Cruzen who was Admiral Byrd's second in command on his last trip to the Antarctic in 1941, reiterated that the United States has made no formal claim to any part of the Antarctic continent and recognizes the claims of no other power. Asked about the possibility that following the expedition the United States would make a claim, Admiral Cruzen said that was the concern of the State Department.

Explorers such as Admiral Byrd and Lincoln Ellsworth had made Antarctic claims in behalf of the United States, he noted, but these were not confirmed by Washington.

Further details of the operation came to light as Admiral Cruzen explained that the ships of neither the Eastern nor Western groups are to enter the ice pack. Each of these groups consists of a seaplane tender with three Martin marine patrol planes, a destroyer and an oiler. Thus the thin hull plates of the expedition's two destroyers will not run the risk of puncture. The patrol planes will have to fly over the pack ice before penetrating inland, thus reducing the range of their surveys, Admiral Cruzen noted.

The expedition lists the ships that will go through to Antarctica as making up the Central group.

The North Wind will open a channel through the pack for the Mount Olympus, the cargo ships Yancey and Merrick and the submarine Sennet. The ships will either follow in column or go through one at a time, depending on the nature of the ice pack, and their passage may take anywhere from a few hours to the better part of a month. The icebreaker Burton Island, also slated for the Central group, will join the expedition in early February.

It is possible, Admiral Cruzen said, that the expedition will be unable to reach the Bay of Whales on which Little America is located. In that case another point of entry to the shelf ice will be selected, such as Okuma Bay, Discovery Inlet or Kainan Bay.

The Mount Olympus, presenting a beam of sixty-three feet for the big squeeze of the pack ice, will be one of the largest ships ever to enter Ross Sea, an expanse of usually open water inside the pack that is swept by a current skirting the face of the Ross ice shelf.

The North Wind is a super-icebreaker ten times as effective as the Bear, which Admiral Cruzen commanded on the last expedition. He said that he believed the North Wind could batter her way through ten-foot sheet ice and that during the recent Nanook exercises in the Arctic she had vanquished broken ice fifteen feet thick.

Haste is the order of the day, Admiral Cruzen said, because the longest day of the year in the Southern Hemisphere, Dec. 21, is nearly at hand and the first sunset at Little America is due on Feb. 20, after which the days become shorter very rapidly.

On board the Mount Olympus are fifty-seven men of an underwater demolition swimmer unit to blast away low ice that borders the permanent shelf ice of the continent near Little America.

These swimmers, under Lieut. (j.g.) Halvor Iverson of Savannah, Ga., may actually swim in the frigid waters bordering the Antarctic shelf and lay 300 tons of varied explosives against the ice. They have rubber suits that cover their entire bodies and seal against leakage. Underneath they wear woolen underwear and clothing.

Lieutenant Iverson is worried about the killer whales and other vicious sea beasts that infest those waters and jump the ice over which they see the shadows of men walking. The swimming may be called off if too many fins are seen moving ominously about the Bay of Whales.

The old main building of Little America may be entirely buried under the winters' snows, Admiral Cruzen said, but it can be found since the masts of THE NEW YORK TIMES radio station there should still be towering above the snow.

As to the chances of correspondents flying over the South Pole, he said that safety considerations made it unlikely that any would go on such flights. Every pound of additional weight in a survey plane reduces its chances of making home base in case of trouble, he said, and one more man would mean also another set of emergency equipment.

West Coast Ship Get Off

SAN DIEGO, Calif., Dec. 2 (AP)—Three naval vessels departed from here today to participate in the Byrd expedition into the Antarctic. They are under the command of Capt. Charles A. Bond.

The ships are the oiler Cacapon, the seaplane tender Currituck and the destroyer Henderson.

Four scientists from the Naval Electronics Laboratory here and one from Scripps Institute of Oceanography at La Jolla, Calif., will be among the 295 members of the research party that will accompany the expedition. They are Roger F. Hopkins, James A. Gibbs and Dr. Waldo Lyon, physicists; and Dr. Robert S. Dietz and Remert J. Man, oceanographers.

WARTIME DEVICES TO GO TO ANTARCTIC

U. S. Operation Will Be Similar to Navy's Island-Hopping Invasions in Pacific

By WALTER S. SULLIVAN
THE NEW YORK TIMES.

ABOARD THE U. S. S. MT. OLYMPUS, Dec. 7—In sweltering tropic heat, the main body of Task Force 68 is assembling here at the Canal Zone for the last leg of the journey to Antarctic ice.

This group has now grown to six vessels. On Monday or Tuesday, when it sets forth into the Pacific there will be eleven ships of the exploration force, headed non-stop for the pack ice.

Operation High Jump is unfolding as an enterprise strikingly similar to the Navy's island-hopping invasions in the Pacific except that the enemies are ice and frigid winds.

There is an operation plan with voluminous annexes and maps. The flagship is the Mt. Olympus, a communications ship which served as a staff headquarters for the invasions of Leyte and Luzon. Among the annexes to the "Opplan," familiar in wartime use, are an airplane rescue plan, a photographic plan and a base development plan.

The cargo ships Yancey and Merrick are loaded with priority items. Before the ships attempt to tie up to the ice and unload, underwater demolition team veterans of the Okinawa and Ie beaches will blast away bay ice so the ships can get close to the permanent ice of the barrier.

Cargo to Be Rushed Ashore

The bay ice breaks up gradually during the summer months of January and February, so there will be a great rush to get the cargo for the Little America airbase off this ice and up the steep slope to the top of the Ross ice shelf, 150 feet above the sea.

Great go-devil sleds, carrying ten tons each, will be loaded alongside by the ships' cranes and hurriedly towed off the thin ice by tractors in trains of three or four. To get them up the slope to the ice shelf, a winch and an endless cable will be rigged, much like a ski tow.

All kinds of mechanized equipment are aboard for this cargo moving. Some have oak planks bolted to treads, making the treads five feet wide so they will not sink into the snow. For the first time finger lifts, familiar on the New York waterfront, will handle cargo on the Antarctic ice.

Whereas Antarctic explorers previously have done flying with almost no navigation aids, the twin-engine Douglas transports at Little America will have many kinds of war-developed devices to get them back to the field.

The airfield will be equipped with new apparatus that only recently came into use at a few American commercial airports. It is a ground-control approach system by which operators at a field can set a plane down on an airstrip completely closed in by fog Experts predict only five clear February days and only two in March.

The radar atop the Mt. Olympus, which tracked Japanese air raids during the war, will follow the exploration planes for great distances on their flights. The latest types of homing devices will be operated to help the pilots find their way back.

Radios to Control Traffic

Radios on sleds and weasels will be used for traffic control. A number of walkie-talkies will be provided. For rescues, one Douglas transport will be rigged with skis. It is hoped that the five other planes can operate on landing wheels.

The planes will carry thirty days of pemmican for each crew member and a package of lampblack. With the lampblack a circle can be made in the snow around a downed plane so rescuers can see it from the air.

No electrically heated clothing is aboard because batteries would make it too heavy. Other types of clothes will be tested, as well as the Army's new E ration, a combination of the old C and K rations. A five-in-one ration, which features canned bread instead of the former "dog biscuit," it was designed for five men but is good for only four with Antarctic appetites.

There will not be any asparagus or pumpkin pie in Little America. On recent Arctic exercises the Navy found that most canned goods could be frozen as hard as a rock and then thawed and served, but asparagus thawed mushy and in the pumpkin cans water separated from the solid parts, as with frozen milk.

Despite the resemblance to wartime invasions, the atmosphere of the expedition is by no means hostile. Rear Admiral Richard H. H. H. Cruzen, the expedition's operational commander, emphasizes that he is eager to cooperate with the expeditions of all other countries. Britain has established bases on the Palmer Peninsula; an Anglo-Norwegian expedition is reported headed for Queen Maud Land, and Russia, Australia and Chile have announced plans to send expeditions to the Antarctic.

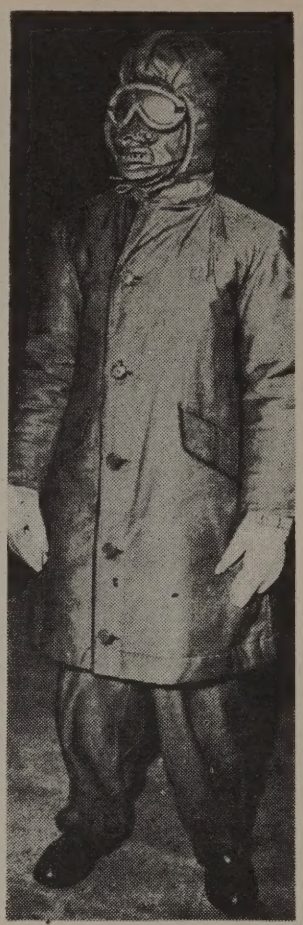
The expeditions caused reports that an international uranium race was developing, especially after Sir Douglas Mawson, Anarctic explorer, said he believed large deposits of uranium would be found in the Antarctic. Scientists aboard the Mt. Olympus say they have no evidence to support this belief, but they will be very happy if uranium is found.

Broadcaster, Ill, Leaves Ship

Aboard the U. S. S. Mt. Olympus, Dec. 7 (AP)—Max Hill, National Broadcasting Company commentator became seriously ill and was to be removed from the Mt. Olympus today and taken to the Canal Zone naval base hospital at Coco Solo.

Another member of the Navy's Antarctic expedition, Seaman 1/C Alexander Bannerman Jr., 19, of Rochester, N. Y., underwent an appendectomy last night aboard the ship. During the operation the vessel's course was changed to reduce its motion. Bannerman's condition was pronounced good.

The Mt. Olympus' daily newspaper, Polar Bear News, changed its name today to Penguin Press because someone remembered there were no polar bears in the Antarctic.



As the men will be dressed for the cold weather.
(U. S. Navy)

Group Will Test Polar Swim Suit

Rubberized Device Expected to Save Lives of Thousands

By JIM G. LUCAS,
Scripps-Howard Staff Writer.

ABOARD USS MOUNT OLYMPUS EN ROUTE TO LITTLE AMERICA, Dec. 11.—Fifty-one young Americans are ready to plunge into the icy waters of the Antarctic Ocean to test equipment which some day may save the lives of thousands.

Rear Adm. Richard E. Byrd's fourth Antarctic expedition envisions the day when large forces will be deployed in both polar regions. The trip is designed to acquaint as many men as possible —in this case 1000 soldiers, sailors and civilians—with the musts of frigid zone survival. In the past a sudden plunge into polar water invariably has proved fatal. At Point Barrow in August a young Seabee who fell into the Arctic Ocean was dead when pulled aboard ship two minutes later.

The Navy has a rubberized swim suit which should provide protection for a much longer period and is relatively light and affords a maximum freedom of movement. The Navy wants to test it under extreme conditions.

The human guinea pigs will be members of the Navy's Underwater Demolition Team No. 4, headed by Lt. Halvor Iverson of Savannah, Ga. It includes three other officers, Lt. Thomas Brady of Kings Point, N. Y., Lt. Herman Garren of Lake Placid, N. Y., and Ens. Robert Marshall of San Antonio, Tex., and 47 enlisted men.

Lt. Iverson expects his men to remain in the water as long as safety permits but will order them out after 20 minutes' exposure.

In addition to the rubberized suit (details of construction are secret) the men will wear rubber fins and a sea diver's mask. The lower part of their faces will be exposed.

Byrd Ship's Lost Puppies Flying to Rejoin Mother

3 Sled Dogs Are Recovered for Antarctic Trip

NORFOLK, Va., Dec. 5 (AP).—All three of her lost puppies were being flown tonight to join Lady, husky sled dog which had to sail away Monday on the Navy's Antarctic expedition flagship without them.

The last of the trio of puppies, which disappeared from the flagship Mt. Olympus shortly before she sailed from Norfolk, was recovered this afternoon. Two were returned to naval authorities Tuesday by a woman who said she received them from a Navy man, and the third was returned today by a family which reported receiving it from a Navy man, also. Navy investigators withheld names of those involved.

Washington aides of Rear Admiral Richard E. Byrd, leader of the polar expedition, have instructed officials to have the huskies flown to Balboa, where the Mt. Olympus is scheduled to arrive Saturday.

Will Take 4th Antarctic Trek

WASHINGTON, Dec. 6 (AP).—Dr. Paul A. Siple, of Erie, Pa., will leave Washington Sunday to join the Byrd Antarctic expedition as the War Department's senior representative It will be his fourth Antarctic expedition. He went there first in 1928 with Admiral Richard E. Byrd, after being selected in a contest among 600,000 Boy Scouts. He was the youngest member of that expedition.

BYRD SHIPS HUNT VANISHED ISLANDS

Craft on Way to Little America Set Course for Nimrod Isles, Last Seen in 1828

By WALTER SULLIVAN
The New York Times.

ABOARD MOUNT OLYMPUS, at Sea, Dec. 21—Two ships of the United States Navy's Antarctic expedition set their course today for the center of the Nimrod Islands. Probably they will not alter their course until they have sailed directly through the charted position of the islands.

In 1828 these islands were sighted about 1,400 miles southeast of New Zealand by the ship Nimrod. Since then seven ships have vainly sought the islands in the belt of storms that girdles the earth of the north Antarctic.

The Yancey and Merrick were ordered by Rear Admiral Richard Cruzen, commander of the exploratory task force, to steam right through the reported position of these islands. Tomorrow night the ships will sweep their radar through the storm and darkness that may have hidden the land from others and will measure the ocean floor with supersonic fathometers that reach beyond the longest lead line of former days. Then they will join the Mount Olympus and other companions bound for Little America.

Hydrographers suspect the islands may have been a mirage, a dirty iceberg or an unusual cloud formation. Hence the two ships may go through the charted position without observing anything but wind and cold weather.

Nine other ships of the task force are nearing the Antarctic ice. It is expected that the eastern and western groups will be in a position to start exploratory flights over the ice shortly after Christmas. The group bound for Little America probably will not reach the ice pack until New Year's Day.

ANTARCTIC SHIPS BID FAREWELL TO PANAMA

ABOARD U. S. S. MOUNT OLYMPUS, Dec. 10—After a last look at the lush vegetation of Panama the main portion of Task Force 68 turned southward today across the Pacific toward Antarctic ice.

The next landfall will be the islands that hug the perimeter of the south polar continent, ice covered masses of volcanic rock on which nobody known has landed.

As the ships sailed out of Balboa this morning harbor craft whistled farewells.

Eleven ships of the Navy's Antarctic Developments Project are now at sea following nine separate tracks on the southwestward journey.

The routes of ship captains across these waters is marked by chains of soundings on existing charts. They show that in this area the sea is nowhere less than a mile deep.

The ships that started from the East Coast and those that started from the West Coast are now following routes 3,000 miles apart.

When the force of which this vessel is a member reaches Latitude 29, South, the three ships of the Eastern group will turn south and head for Peter First Island. The remainder will continue to Scott Island, being joined en route by two cargo ships from the Pacific Coast.

The Western group will thread its way through the Tuamoto Archipelago and then assemble at the Balleny Islands.

Links to Easter Island Found by Antarctic Ship

ABOARD U. S. S. MOUNT OLYMPUS, at Sea, Dec. 18—The United States Navy's Antarctic expedition began its exploration auspiciously last night, discovering a submarine mountain range that rises at least 11,000 feet from the floor of the Pacific Ocean.

The range appears to reach from Easter Island toward the South American mainland. Easter Island always has been an ethnic mystery. The source of the prehistoric civilization that produced its giant stone monuments has never been agreed upon.

Those who believe that an advanced civilization once existed on a lost continent in that area stress that the images on Easter Island required a large population to create them.

650,000 Letters on Ship

The postoffice of this ship, equipped to handle mail for a crew of 600, is crammed with 650,000 pieces of mail from cachet collectors throughout the world.

Philatelists from every state in the United States and from thirty-five countries made the Dec. 1 deadline for letters to be mailed. Their letters are being carried to the Antarctic and will be mailed with a special commemorative cachet stamped on.

The envelopes will be stamped with the title of the expedition, the name of the ship and a picture of a penguin digging a Navy anchor into the Antarctic shelf ice.

Commemorative cachets have been used on previous Antarctic expeditions. Some collectors put on their letters stamps from the series issued to commemorate the second Byrd expedition in 1933.

Among the letters received are some addressed to President Truman and to King George and Princess Elizabeth in London.

Pictures of Antarctic Expedition Likely to Excel Those of Bikini

By Robert E. Nichols
By Cable to the Herald Tribune
Copyright, 1946, New York Tribune Inc.

ON BOARD THE MT. OLYMPUS, Balboa, C. Z., Dec. 7 (Delayed).—Chugging donkey cranes and sweating stevedores piled one last cargo of film and cameras on this ship today, preparatory to an Antarctic operation which promises to make photographic history.

Operation High Jump is expected to produce even more spectacular photography than the atomic bomb test pictures made at Bikini. While Operation Crossroads at Bikini will probably continue to hold the record for the number of pictures taken in a few minutes at one event, this Antarctic expedition is expected to set a record for documentary motion pictures.

Furthermore, the area to be filmed will be the largest ever recorded photographically in so short a time. Photographic officers on board the Mt. Olympus expect to film in less than two months a region almost equal to the area of the United States.

Total photographic resources on this expedition, after today's new load, include eighty-two aerial cameras, fifty-four motion-picture cameras, fifty-four documentary still cameras and sixty-one miles of regular motion picture film. Much of the equipment is aboard this flagship, where twenty of about sixty exhibition cameramen are preparing lenses, shutters and timing instruments for the Antarctic's abnormal temperatures.

Task Force 68, incidentally, will take the first color motion pictures of South Polar lands. If all the color film to be used is reproduced successfully, the expedition will produce films which will run for two days and two nights. If all of the ordinary film is successful, the resulting pictures would run more than five days and five nights.

Two men, in particular, are behind this project. Captain Robert S. Quackenbush jr., expedition chief of staff, has a long background in photography and aviation, and directed all the photo operations at Bikini. Lieutenant Charles C. Shirley, his aid at Bikini, is in actual charge of Operation High Jump photographic work.

Quackenbush, as administrator of the expedition and second only to Rear Admiral Richard E. Byrd, commander of the expedition, and Rear Admiral Richard H. Cruzen, will be a key figure in assuring success of photographic operations. He will co-ordinate the aerial reconnaissance of the task force. Quackenbush lives at Cornwall on the Hudson, N. Y.

Skis for Byrd Expedition Miss Cargo Ship; Arrival by Carrier in January Is Forecast

By WALTER S. SULLIVAN
Special to The New York Times.

ABOARD U.S.S. MOUNT OLYMPUS, at Sea, Dec. 17—The Navy's record-breaking Antarctic expedition, whose personnel total 4,000, will arrive in the polar regions with only a handful of privately owned skis, it was learned today.

According to naval officers aboard, the expedition's skis ordered from an east coast depot failed to arrive at Port Hueneme, Calif., in time for the sailing of the cargo ships Yancey and Merrick. Plenty of ski boots and ski poles are aboard, but no skis.

It is hoped that the skis will arrive late in January aboard the carrier Philippines Sea.

Veterans of previous Antarctic expeditions on board say that skis are necessary for trail-blazers, but the majority of those on the ice will work along a beaten track from the ships to the air base and on the landing strip and therefore will not need skis.

For exploration and search parties, however, skis are essential, they say. Capt. Vernon D. Boyd, USMRC, of Arlington, Va., a veteran of previous Byrd expeditions, says that explorers like Rear Admiral Richard E. Byrd and Roald Amundsen made extensive use of skis on the trail. Capt. Robert F. Scott and Sir Douglas Mawson lost men in crevasses because they did not do so, he added.

Meanwhile, as this ship crossed the Tropic of Capricorn, a style show was held today of what the well dressed Antarctic explorer should wear.

POLAR CREW TESTS SUIT WITH BOOTS

Aboard U. S. S. Mount Olympus, Dec. 18 (A. P.).—The Navy trotted out a little number today which should make sailors on the Antarctic expedition the envy of firemen everywhere: A one-piece suit with boots attached.

The suit is intended for use in case of emergency, such as a general quarters alarm, when it is important to get dressed and on the job in a hurry. It is part of the experimental cold weather clothing which will be tested in the Polar region.

Lieut.-Commander Gordon Hughes said that the Navy will study the use of different types of dress for men exposed to the elements, and those who are sheltered. One question this may answer is whether slide fasteners or some other type are best in severe cold.

Hughes explained that all the clothing is bulky because it is fashioned in layers which trap air for insulation, and it is roomy because that avoids any impediment to circulation of the blood.

ANTARCTIC PLANES POISED FOR FLIGHT

Navy Expedition's Mariners to Soar From Tender Over Unexplored Oates Land

By WALTER S. SULLIVAN
THE NEW YORK TIMES.

ABOARD MOUNT OLYMPUS, at Sea, Dec. 23—Giant patrol planes of the United States Navy's exploratory task force prepared today for their first flight over Antarctica as the seaplane tender Currituck and the destroyer Brownson arrived in the vicinity of the Balleny Islands. [The Balleny Islands are on the Antarctic Circle at Longitude 162 East, almost due south of New Zealand.]

This put the expedition in a position to send flights across the Oates Land coast of Antarctica into a vast region of the South Polar continent never before sighted by man.

The plan is to station ships of the group along a 600-mile line parallel to the outer edge of the pack ice. The Currituck will be in the center with the Brownson and the oiler Cacapon 300 miles on either side. The Cacapon is now overtaking the other two.

To Get Bearings From Ships

The pilots of the Martin Mariner patrol planes, as they wing deep into the continent and as they near the coast on the return, will be able to triangulate their positions by taking bearings on radio transmissions from the ships. This is vital, as the planes will be flying close to and even directly over the South Magnetic Pole, thus rendering their magnetic compasses useless. The best available electronic devices will help to guide the fliers.

The planes will fly in pairs sixty miles apart. They hope to reach a distance of 700 miles from base on the Currituck, which will be stationed about 200 miles from the estimated edge of Oates Land.

When in flight each plane will constantly check by radio with the tender and with its companion plane. In case contact is lost, each plane of a pair is under orders to fly over to the other plane's track and fly back along that route on the lookout for trouble.

Alternate radio frequencies will cover a wide range, because the nearness to the Magnetic Pole means that static and communications blackouts will be at the worst.

The Currituck will be forced by geography to skirt the Antarctic continent in the latitude of the worst weather. However, it is hoped the icepack will provide a lee of smooth water where the big planes can take off and alight.

The Currituck carries one small seaplane and two helicopters, which will be handy in searching out clear leads through loose ice along side the pack.

The two wing ships, in addition to providing radio bearings, will broadcast weather reports at regular intervals.

According to Comdr. Robert M. Allison of Hillsdale, Pa., the air operations officer, while a flight radius of 700 miles is feasible, the first hops will not attempt to reach that far. A photographic survey of the entire coast line to the west of the Ross Sea has high priority and could serve for these first test flights.

Commander Allison has high hopes of no serious trouble. He says these sturdy seaplanes have landed on sand and could easily be set down on the snow of the Antarctic plateau. The Mariner's engines have the best maintenance the Navy can offer and the tender is equipped to service twelve of the planes although the Currituck now has only three aboard.

He rates them as better for the first Antarctic work than the Douglas transports, which in about a month will be flying searches, five abreast and sixty miles apart, from an air base on the Ross shelf ice. In an extremity the seaplanes can fly out to sea and alight.

Meanwhile, the Eastern Group of the expedition was still well north of the icebergs, among which the West Group is now maneuvering, and was not expected to reach Peter I Island and start its flights till about Thursday.

The search plan of the Eastern Group will be similar to that of the Currituck's group. The latter is under command of Capt. Charles A. Bond of Arlington, Va. The Eastern Group is under Capt. George J. Dufek of Rockford, Ill.

Christmas Tree Lashed to Mast As Mt. Olympus Nears Antarctica

By WALTER SULLIVAN
THE NEW YORK TIMES.

ABOARD MOUNT OLYMPUS, at Sea, Dec. 25—Alongside the ice pack in the stormy seas north of the Antarctic, 3,000 young Americans in the Navy's exploratory task force celebrated Christmas today as best they could.

On the seaplane tender Currituck, in the lee of an unbroken belt of pack ice, sailors watched for their first sight of a penguin. Still steaming southwest, the submarine Sennet dug through waves that swept over the conning tower and watchstanders.

Aboard this flagship, ahead of the Sennet, a spruce tree from Canada swung in the bitter wind atop the mainmast. Below decks, where occasional Christmas decorations hung on steel bulkheads, sailors, scientists and officers marked the holiday.

Behind the closed curtain of his stateroom, Rear Adm. Richard H. Cruzen unpacked Christmas stockings sent by his children, Nathaniel and Suzan, from his home in Washington.

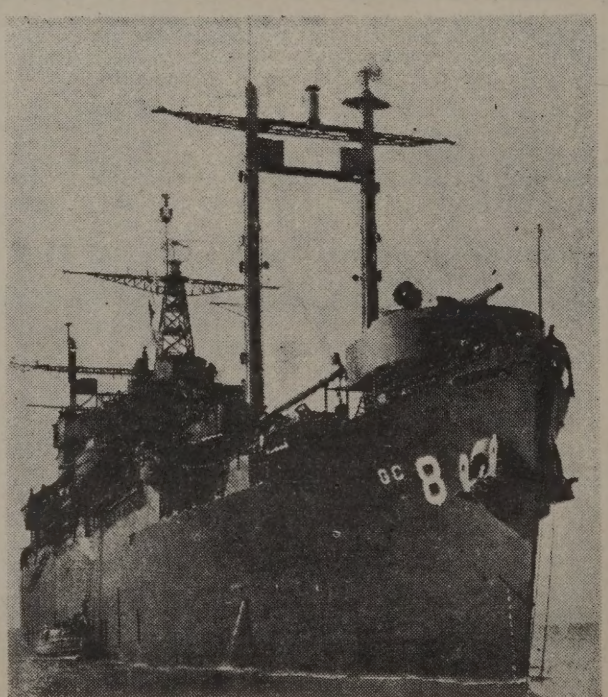
Arthur C. Haynes of the United States Weather Bureau retired from a noon feast and thought of Scott's Antarctic expedition, with its starving rations of pemmican and pony meat. Mr. Haynes had just eaten turkey with oyster dressing, lobster, Virginia ham, mince pie, ice cream, candy and nuts.

Lieut. (j.g.) Herman L. Warren Jr. of Lake Placid, N. Y., a member of the underwater demolition team that plans to swim alongside the ice at Little America Bay, played a well-worn recording of Tchaikovsky's piano concerto and looked through a porthole at the turbulent sea.

Many of the crew have never before spent Christmas away from home. Teddy Mitchell, steward's mate second class, of 208 West 148th Street, Manhattan, is one of those. He spent his spare time today talking of home with another boy from Harlem.

Last night there was a Christmas Eve party. The chief attraction was a race between three men to don full cold-weather uniform. The audience got as warm laughing as the competitors did as they scrambled into seven layers of cloth and fur.

To all ships in the task force went the cruising message: "We are a long way from Santa Claus' home. Nevertheless, he will arrive on schedule, for the spirit of Christmas extends from pole to pole. To each and all a Merry Christmas."



The U. S. S. Mt. Olympus is the flagship of the expedition's Task Force 68. (U. S. Navy)

SHIPS FAIL TO SIGHT NIMROD ISLANDS

ABOARD MOUNT OLYMPUS, at Sea, Dec. 25

Several islands that have been shown on charts for more than a century passed into limbo yesterday as ships of the task force sailed through the islands' positions without seeing any sign of land.

The seaplane tender Pine Island and the destroyer Brownson, steaming fifty miles apart toward the Bellingshausen Sea pack ice, saw no evidence of Swain's Island, though the day was clear and radar swept the horizon in all directions. Soundings showed a uniform depth of 2,200 fathoms.

Meanwhile, the Yancey and Merrick, in similar formation, sailed over the charted locations of the Nimrod Islands. They have as yet reported no land sighted.

Swain's Island was reported by Capt. Jonathan Swain, an American, in 1809. He said it was snow-covered and abounding in seals and birds. The Nimrod Islands were reported sighted in 1828 by the ship Nimrod, but seven other ships have sought for the islands in vain since then.

The Currituck has sent its first planes over the pack ice north of Victoria Land. Weather prevented a Martin patrol plane from making more than a local test flight, but a helicopter scouted the ice. The ice seemed to be solid, with no leads in toward the continent.

NAVY SHIPS GATHER OFF ROSS SEA PACK

Main Group Prepares to Head for Little America—Storms Still Bar Antarctica Flying

By WALTER SULLIVAN
THE NEW YORK TIMES.

ABOARD MOUNT OLYMPUS, Off Ross Sea, Dec. 29—Today is the seventh day that the West Group of the Navy Task Force expedition has been off the coast of Oates Land within easy flying range of the Antarctic mainland, and its planes have still not had a chance to catch a first glimpse of the South Polar continent.

So choppy was the water alongside the ice pack off Ellsworth Land far to the eastward, on Thursday, that a small boat crashed into the hull and a wing-tip of a Martin Mariner plane of the expedition's East Group. The damage was slight and was repaired in a few hours.

So far the East Group has been unable to send a flying boat into the air. The West Group has made only one such flight—a short patrol. Otherwise all hops had been by helicopter to scout the ice pack.

The Central Group of the expedition, with the Mount Olympus as flagship, bound for Little America, has been steaming for three days in fog northeast of the Ross Sea.

In "Stormiest Seas in World"

All three groups are in what Navy sailing directions call "the stormiest seas in the world," and the two seaplane groups must remain in these latitudes throughout the operation. Probably nowhere else do winds match the 200-miles-an-hour gusts of the Ross Sea region.

[The Central Group was sailing toward a Dec. 30 rendezvous at the International Dateline, Long. 180, off the center of the Ross Sea, according to a late Associated Press report from the Mount Olympus. There the group was to restock from the cargo ships Yancey and Merrick and then head in toward the Ross Sea pack under the guidance of the icebreaker North Wind.]

Fog and overcast skies are the normal condition during January and February both at Little America and along the edge of the pack ice that girdles the continent.

At Little America, where the expedition hopes to launch land planes on long-range flights, only five clear days can be counted upon in January, three in February and two in March. Around the edge of the ice pack, weather experts anticipate no more than one or two clear days a week.

With the latest aviation instruments, radio bearings and no land obstruction, it is hoped the seaplanes can be landed in the lee of pack ice when ceilings are only a few hundred feet. However, if there is continued overcast, photography will be impossible and flights will be useless.

To meet the challenge of the Antarctic weather and extend man's knowledge into the skies above this almost unknown continent, as well as across its frozen surface, the Navy is using its latest weather observation techniques.

Twice daily the destroyers Brownson and Henderson with the East and West groups, respectively, release helium balloons of four feet in diameter. As the balloons rise the winds at various levels throw them one way and another and the destroyers' radars plot their movements. Thus the direction and force of the winds can be known.

The expedition's two seaplane tenders, the Mount Olympus and the icebreaker North Wind release higher-soaring balloons carrying radio sound equipment. This continuously broadcasts data on temperature, humidity and air pressure as well as altitude until the balloons explode at above ten miles.

The ships of the East and West groups have orders to operate 300 to 600 miles apart to widen the scope of weather information. The two groups will work around the Antarctic continent in opposite directions reporting the weather as they go.

The expedition's planes that are to fly deep into the continent will report conditions above the mountain-rimmed Polar Plateau.

A Japanese whaler that has been authorized by General Douglas MacArthur to hunt off Victoria Land has begun daily reports to this ship, and soon weather reports should be coming from two such vessels.

In a few weeks an automatic weather station will be set up on the coast of Victoria Land by a party from the North Wind. Since Antarctic storms generally move northeastward, this will give advance notice of Little America's weather.

In the course of time these storms continue northeastward into the Temperate Zone. Antarctic weather-reporting should some day play a world role.

International implications of the Navy's Antarctic project were highlighted today as this flagship received word that the British are still holding the American buildings on Marguerite Bay in the Palmer Peninsula area. The United States expedition under Comdr. Finn Ronne is scheduled to start for that area in a few weeks. Its plans are predicated on the use of the facilities now in British hands.

According to Dr. Paul A. Siple, chief Army observer with this expedition, the first word of the British occupation of the so-called East Base on Marguerite Bay—established by the Byrd Expedition of 1940-41—came after the British had been there a year and asked what should be done about the Byrd supplies, some of which they had already used. Dr. Siple commanded the West Base at Little America on the 1940-41 expedition.

Britain, Argentina and Chile claim the Palmer Peninsula region. Plans are reported for a Chilean to accompany Commander Ronne on his projected reoccupation of that base.

AMERICAN SHIPS START TO RENDEZVOUS NEAR ANTARCTICA

Dec. 30, 1946

Vessels of the Byrd expedition, some of which sailed from the East Coast of the United States and others from the West Coast, are organized in three groups. The West Group is off Oates Coast (1), waiting to launch planes for aerial exploration. The Central Group is momently expecting to meet two cargo ships in the vicinity of Scott Island. The East Group is somewhere near Peter I Island. On the way southward some of the ships sailed close to the position once given for the Nimrod Islands, but found no evidence that they existed. A British party is at Marguerite Bay (2), where the American Ronne expedition will make its base.

Navy's Planes in Antarctic Scout Uncharted Ellsworth Land Coast

ABOARD MOUNT OLYMPUS, Dec. 30 (AP)—Two United States Martin Mariners soared over uncharted and unclaimed Antarctic lands today, beginning for the Navy's expedition the huge task of photographing the South Polar continent.

The planes took off from the seaplane tender Pine Island of the Eastern Group of this exploring fleet for surveys over the largely unknown coastline in the vicinity of the Franklin D. Roosevelt and Bellinghausen Seas and inland over Ellsworth Land.

The first plane returned to the Pine Island just before midnight Sunday after an eight-hour 1,000-mile flight, then quickly refueled and took off again. The second plane got off at 7:30 P. M. on a 1,350-mile hop expected to take ten hours.

Rear Admiral Richard H. Cruzen, the expedition commander, aboard the Mount Olympus, directed the planes' crews to give first priority to mapping the coastline, then back up their records with photographs of the interior.

Aboard the first plane on its first trip was Capt. George Dufek of Rockford, Ill., who discovered Thurston Peninsula between the two seas on a flight in February, 1940, when Rear Admiral Richard E. Byrd made two flights in the same area. Admiral Byrd is due to join this expedition later.

Captain Dufek is commander of the Eastern Group. His plane was piloted by Lieut. (j. g.) James L. Ball of Anson, Tex. A new crew was aboard on the plane's second flight.

The seaplanes were equipped with triple-lens cameras, which take photographs straight down and sidewise in both directions. This is Antarctic summer with sunlight around the clock.

The Eastern Group of ships lay today about 350 miles off the coast outside the icepack. The first plane was able to go about 500 miles from the mother ship and the second about 650 miles, but if they followed the coast far there was little mileage left for inland scouting.

There was no report today from the Western Group of ships, which has been fogbound.

Fog also was hampering the speed of the Mount Olympus and the other ships of the Central Group, which is now north of the Ross Sea. A rendezvous had been expected early today with cargo ships, prior to the group's heading for Little America.

At least 150 icebergs of all sizes were sighted from the Mount Olympus yesterday, while the fog closed in repeatedly and made navigation tricky. As many as seventeen icebergs were visible simultaneously.

Admiral Cruzen said he had never seen quite so many bergs before in this area.

POLAR SHIPS EASE INTO ICE FRINGES

5 Vessels Plan to Follow Path Breaker—Submarine May Study Floes From Below

By WALTER SULLIVAN

THE NEW YORK TIMES.

ABOARD MOUNT OLYMPUS, at Sea, Dec. 31—Five ships of the United States Navy's Antarctic task force today nosed into the loose fringes of the ice pack, the last barrier that bars them from their goal—Little America.

It appeared that these ships of the Central Group, loaded down with Seabees and material for an airfield, would be able to follow in the wake of the icebreaker North Wind. The latter plowed deep into the pack last night and sent a helicopter soaring ahead to scout 135 miles across the belt of the pack ice. The pack seemed loose enough to permit all five through at once in a column.

When all are inside the pack the submarine Sennet may submerge and take a look at the underside of the ice. She is equipped to take inverted soundings on the bottom of the ice to make sure she is a safe distance below.

A special supersonic device is pointed directly upward to echo off the bottom of the ice floes. With her powerful lighting equipment, it is hoped to take photographs of the ice form below.

Another submarine tried this in the Arctic last summer, but her light was too weak and she nudged the ice at a depth of eighty feet. It was emphasized that the Sennet will run under floes of frozen sea water, not under bergs from the continental ice blanket that draw about 400 feet.

It is hoped that the photographs will settle doubts as to the physical characteristics of the ice bottom. Some believe so smooth a submarine with positive buoyancy and runners atop could skid along under the ice. Others suspect the under side is rough, with possible pinnacles reaching down.

ABOARD MOUNT OLYMPUS, Dec. 31 (AP)—The polar expedition awaited today full reports of three photographic and scouting flights over the Antarctic regions by planes of the Eastern Task Group. The planes took advantage of a break in foggy weather to make the flights over the general area of the Roosevelt and Bellinghausen Seas. The Western Group, which is now north of Victoria Land, has been unable to operate planes because of the fog.

Rear Admiral Richard E. Byrd conferring with his staff in Washington. Left to right, seated: Capt. Richard H. Cruzen, Task Force commander: Admiral Byrd, and Capt. George J. Dufak, head of Task Force East group. Standing are Capt. Robert S. Quackenbush and Capt. Charles Bond, commander of Task Force West group.

Byrd to Sail Jan. 2 On Antarctic Trip

Washington, Dec. 27 (A. P.).—Rear-Admiral Richard E. Byrd will sail from Norfolk, Va., January 2 aboard the aircraft carrier Philippine Sea to join the Navy's antarctic expedition which he heads.

Carrier Leaves Icy Boston

THE NEW YORK TIMES.

BOSTON, Dec. 27—Moving down the harbor in icy winds that gave her crew of 2,200 officers and men an inkling of what lay ahead, the 27,000-ton carrier Philippine Sea headed south today.

The Navy's newest operating aircraft carrier will take on supplies at Norfolk. There Admiral Byrd, who was home in Boston for the Christmas holidays and also left last night for Washington, will go aboard.

The Philippine Sea will pick up in Norfolk six Navy R-4-D's, twin-engined Douglas transport planes, that are being flown there from Quonset, R. I. The Navy said these planes would bear the brunt of the polar flying.

The carrier also will be equipped with JATO (jet-assisted take-off) to enable the transport planes, which have a 99-foot wing span, to leave the ship in rough seas. They will be the first planes of that type to be launched by a carrier.

In addition she will base six Vought-Sikorsky helicopters, six PBM's, two Grumman amphibians, two SOC float planes and one Noorduyn Norseman ski plane.

Planes to Go From Carrier

Some time ago Admiral Byrd contemplated flying non-stop from the United States to Antarctic on board the famous airplane Truculent Turtle. This plan has been abandoned.

The carrier will rendezvous with vessels of the central group of Task Force 68, which already is in the area of the Ross Sea. When the carrier is 400 to 500 miles from Little America, planes will leave her deck to take Admiral Byrd and others to the Ross Shelf ice, where a landing strip will be ready.

New Polar Areas May Be Named For U. S. Leaders

But Byrd Expedition Will Withhold Choice To Avoid Controversy

By JIM G. LUCAS,
Scripps-Howard Staff Writer.

ABOARD MT. OLYMPUS, Dec. 28. — Newly discovered territory and mountain ranges in the Antarctic may be named to honor President Truman, Adm. of Fleet Chester W. Nimitz, Navy Sec. James V. Forrestal and the late Frank Knox, Mr. Forrestal's predecessor.

Adm. Richard E. Byrd has estimated that his men will chart 2,000,000 square miles, half of the remaining unknown area. George Howard, U. S. Geological Survey expert aboard this ship, believes missing links will be found connecting the Edsel Ford, Rockefeller and Queen Maud mountain range, proving that they are part of a prehistoric ring which once circled North and South America, Antarctica, Australia, Asia and the Aleutians and including the Rocky Mountains, the Sierra Madres and the Andes.

To Withhold Names.

Veterans of previous Byrd expeditions, intend to withhold names for their discoveries until they have returned to Washington and have had a chance to consult the Interior Department's geographic board. The controversy which followed the third and fourth Byrd expeditions is not forgotten.

The argument began when the Navy's hydrographic office printed Antarctic maps without consulting the geographic board. The board refused approval of the maps insisting they violated precedent by using names of persons still living.

Members of the Byrd expedition were aroused, insisting the board has gone too far in picking new names for those it disapproved.

Say Authority Was Exceeded.

Critics said the board exceeded authority because its jurisdiction extended only to geographical names in U. S. territory; the U. S. had asserted no claim to Antarctica, and also many American names were in territories claimed by other nations.

Rear Adm. Richard Cruzen, tactical commander of this task force, says he is not planning to do any naming until Adm. Byrd arrives in January. Meanwhile he will refer to new geographical features by number.

Special Congressional Medal Goes to Byrd And 15 Others for 1939-41 Antarctic Task

THE NEW YORK TIMES.

WASHINGTON, Nov. 29—Sixteen members of the little-advertised United States Antarctic Expedition of 1939-41 were presented by Navy Secretary James Forrestal today with special Congressional Medals as a recognition of their achievements in the southern Polar Seas.

They were only a part of 159 expedition members to be honored with the special medals, but the others were unable to be present at the ceremony.

Most of the men who received the coveted decoration are about to depart for the Navy's expedition to the Antarctic, to be headed by Rear Admiral Richard E. Byrd (retired). The medals, approved by an Act of Congress, which was signed by the President last September, were presented as Mr. Forrestal read from the citation:

"In recognition of invaluable service to the nation by courageous pioneering in polar exploration, which resulted in important geographical and scientific discoveries."

Admiral Byrd was one of those honored today. Recently the recipient of a decoration for his work during the war, the admiral commanded the 1939-41 expedition, which was shrouded from publicity partly because the world was then absorbed by an obviously approaching global war.

Decorated also was Rear Admiral Richard H. Cruzen, USN, of Washington, who, as a naval captain, commanded the Bear in the 1939-41 exploration, and was also second in command of the expedition itself. Another was Lieut. Col. Paul A. Siple, USAR, of Arlington, Va., who took command at Little America, an expedition base. A third was Comdr. Finn Ronne, USNR second in command at the expedition's East Base, and who is now preparing for an Antarctic exploration.

The others decorated today were: Lieut. Arnold Court, AUS, of Washington; Capt. Murray A. Wainer, AUS, of Bradley Beach, N. J.; Herwill M. Bryant of Washington, Malcom Davis of Washington, Capt. Herbert G. Dorsey, AUS, of Washington; Capt. George J. Dufek, AUS, of Washington; Lieut. Col. J. Glenn Dyer, AUS, of Washington; Chief Petty Officer Sigmund Gutenko, USN, of Baltimore; Roger Hawthorne of Silver Spring, Md.; Lieut. Comdr. Frederick G. Dustin, USNR, of Morrisville, Vt.; Maj. Theodore A. Peteras, USMC, and Lieut. Comdr. Clay W. Bailey, USN, of Falls Church, Va.

The Navy Department said that the 1939-41 expedition made a "significant achievement" in the discovery of 1,000 miles of new coast line between the bases, one at Little America and the other to the eastward on Palmer Land. This, it was said, was a very inaccessible area on account of the bad weather and the "unnavigable ice-pack."

Mr. Forrestal requested Admiral Byrd to make arrangements for the presentation of the special Congressional Medals to the expedition members who could not be present today.

U. S. Restates Its Policy on Antarctic Area

Acheson Says No Claims Are Made, but Rights at South Pole Are Reserved

By Frank Kelley
New York Herald Tribune

WASHINGTON, Dec. 27.—Amid a flurry of international expeditions to the Antarctic, the United States reasserted today its policy of not recognizing any claims of other nations in the area and not making any claims for itself, although reserving all rights it may have in the South Polar region.

The American policy was restated by Acting Secretary of State Dean Acheson in disclosing that the British weather station at Marguerite Bay in the Falkland Islands Dependencies—an area claimed by Great Britain—will cooperate with the private American expedition to that region to be led by Commander Finn Ronne, United States Naval Reserves. Commander Ronne will depart next month with a United States Navy vessel provided by act of Congress.

Mr. Acheson repeated British denials that the British government had been asked by the United States to remove its station from Marguerite Bay. He said that the British, in reply to a State Department inquiry about facilities, made at Commander Ronne's request, had said only that there would be insufficient space for two full-sized expeditions at Marguerite Bay and insufficient seals for food.

The United States Antarctic Service expedition that operated in the Marguerite Bay area in 1939-1941 left behind considerable property, including huts, machinery and supplies, Mr. Acheson recalled. He said Commander Ronne had requested information on the condition of this property, and the British in replying had expressed their willingness to work out arrangements for co-operation between the British and Ronne expeditions.

Other current missions to the South Polar regions include Rear Admiral Richard E. Byrd's "Operation High Jump," a Russian flotilla of ten whaling ships and a Japanese whaling fleet operating by permission of General Douglas MacArthur.

In addition, the British are discussing another Antarctic visit by the British ship Trepassey. Norway is reported to be planning a joint Anglo-Norwegian expedition, probably to Queen Maud Land on the other side of the Antarctic continent from Admiral Byrd's operations. New Zealand, Chile and Argentina also have been talking of dispatching expeditions.

American records list Britain, France, Norway and Chile as the four main claimants to land on the Antarctic Continent, which is estimated to have an area of 5,000,000 square miles, about one-third again as large as Europe.

British claims are in three main areas: the Falkland Islands Dependencies below Cape Horn, South America (claimed in 1908 and 1917); the Ross Dependency, including Admiral Byrd's old base at Little America (claimed in 1923), and the Australian Quadrant, south of Australia (claimed in 1933).

Chile, in 1940, laid claim to all land in the quadrant between 50 degrees west longitude and 90 degrees west longitude, including some of the previous British claims in the Falkland Dependencies.

France's claim, made in 1924 and 1938, is to Adelie Land, discovered by Dumont D'Urville in 1940. It lies between 136 and 142 degrees east longitude, south of 60 degrees latitude. Adelie Land lies in the so-called Australian sector.

Norway in 1939 claimed the coast and hinterland of the Antactic Continent between 45 degrees east longitude and 20 degrees west longitude. This was in addition to scattered Antarctic Islands previously claimed.

Claims have been asserted in behalf of the United States by its citizens, Mr. Acheson recalled today, but he repeated that the United States itself has never formally asserted any claims.

Antarctic Claims May Be Put Up to U.N.

By the United Press.

WASHINGTON, Dec. 28.—State Department sources said today the growing international rivalry for land in the Antarctic may well require action by an international conference or the United Nations Security Council.

Noting that at least eight nations are casting covetous eyes on South Polar regions, American experts saw the need for an early determination of just what constitutes valid, modern-day exploratory claims.

Wants Antarctic Under U. N.

MEDFORD, Mass., Nov. 19 (AP). —With a race developing among several nations for exploration of the Antarctic—possibly for uranium—a Tufts College professor of diplomacy suggested today placing the area under the United Nations now to avoid possible "endless controversy." Professor Leo Gross, of the Fletcher School of Law and Diplomacy at Tufts, said in an interview such a plan "might avoid a good deal of controversy later—especially if anything worth while is found in that region."

SUPER-TELESCOPE TO SCAN ANTARCTIC

Ronne Expedition Equipment Will Include a Specialized Cosmic-Ray Instrument

North American Newspaper Alliance.

PHILADELPHIA, Dec. 7—A super-specialized cosmic-ray "tele scope" is being assembled at the Bartol Research Foundation of the Franklin Institute here for use in the Antarctic.

Specially designed by Dr. W. F G. Swann, director of the foundation at Swarthmore College, it will be in constant use from start to finish of the thirteen-month privately financed Ronne scientific expedition to the south polar region.

Constructed like an oblong layer cake, the instrument will snub all but the best cosmic rays, those that fall vertically to earth. It will differentiate also between their two component parts—the soft and hard, or electrons and mesatrons.

H. C. Peterson, physicist with the twenty-man expedition that leaves in January, is at the foundation studying the operation and maintenance of the delicate and complicated apparatus.

Based on Geiger Counter

The new cosmic-ray counter, Dr. Swann emphasized, is not fundamentally unique. As are others, it is based on the Geiger counter, developed some forty years ago to study the Alpha particles of radium and most recently prominent in checking on radio-activity connected with the atomic bomb.

However, the device being readied for the expedition is custom-built to accomplish certain specific types of observation planned to lead to a better understanding of the nature of cosmic radiation. This remains something of a scientific mystery. Even the source of cosmic rays is a matter of speculation.

To accomplish the specialized observations, Dr. Swann planned the "telescope" as a set of five steel trays, each about a yard long and a foot wide. The trays are held one above the other, some six inches apart, in a strong metal framework.

The Polar Times

Published June and December by the AMERICAN POLAR SOCIETY, Care American Museum of Natural History, Central Park West at 77th Street, New York, N. Y.

AUGUST HOWARD, Editor

THE POLAR TIMES highly recommends "The Polar Record," published January and July by the Scott Polar Research Institute, Cambridge, England.

The American Polar Society was founded Nov. 29, 1934, to band together all persons interested in polar exploration. Membership dues are one dollar a year, which entitles members to receive THE POLAR TIMES twice a year.

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COMDR. FINN RONNE.

At each end of the trays are a series of nine glass-encased tubes less than an inch in diameter and eight inches long, fixed side by side. These form the "lens" of the "telescope." A complex system of wiring connects these ray-sensitive tubes to electrical circuits powered by a large storage battery and a number of dry cells.

The total of forty-five tubes at the opposite ends of the five layers of trays function as independent units so that a double check is provided of the count. Thus, if one set fails, the other may still operate.

An important feature is represented by two-inch blocks of lead that insulate the tubes on the fourth tray from those on the three above and the one below. This insulation blocks the penetration of the soft part of the cosmic rays.

Protected From Shock

The electric circuits are so arranged that the rays, to register must pass through either the first three layers of tubes or all five. This assures the counting of only those descending vertically. The hard part of the rays will be counted after passing through all five layers of tubes.

In final form the "telescope" will be mounted on gimbals to keep it from shock and enclosed in a box heated by an electric light bulb to protect it from cold.

The instrument will start functioning as soon as the expedition's ship leaves New York and will continue registering until the return to port. In the Antarctic it is planned to take the "telescope" to an altitude of at least 20,000 feet by airplane.

Dr. Swann said the foundation is taking advantage of the polar trip to make further studies of the variability of cosmic rays. It seeks to measure the variations of the rays' independent soft and hard components in relation to the change of latitude between this area and the Antarctic, he added.

"The proportion of the two components and the change of their properties with latitude has a significant bearing upon the theories of the nature of cosmic ray phenomena," he stated.

RONNE AIDES BEGIN POLAR OUTFITTING

Antarctic Expedition Will Stock Food for 18 Months—Alaskan Husky Is Mascot

North American Newspaper Alliance.

WASHINGTON, Dec. 14—Four former merchant marine officers, the vanguard of the Ronne Antarctic Expedition, will arrive in Beaumont, Tex., on Monday to start outfitting the expedition's specially chartered Navy ship.

The four officers, headed by First Mate Walter H. Smith, former marine lieutenant from Hampton, Va., will take command of the Diesel-powered wooden ship at the Beaumont Navy Yard, where she has been undergoing alterations.

The ship, known as Navy ATA-215, was specially chartered for the Ronne expedition by an Act of Congress last July. It was formally signed over to the expedition by Navy Secretary James Forrestal in Washington this week.

The three other officers who will accompany Lieutenant Smith are C. G. Whitehead, of Hampton, Va., chief engineer; E. A. Wood, of Hampton Va., second mate; and Nelson C. McClary, of Winnetka, Ill., who will be the ship's second engineer.

Led by Commander Finn Ronne, USNR, veteran, polar explorer, the twenty-man expeditionary group of physicists, geologists, mineralogists, meteorologists and glaciologists will get under way for the year-and-a-half trip to the South Pole from Beaumont about Jan. 15.

With the expedition destined to stay in the Antarctic through the whole dark winter period, the four officers will outfit the ship with enough food to last eighteen months, 35,000 gallons of Diesel oil, 7,000 gallons of regular oil and more than thirty tons of coal for heating purposes.

Also included in the expedition's equipment will be a dozen tractor and dog sleds, three specially designed Army Air Force planes, four tons of aerial photography apparatus and three Army "weasels" or cargo carriers. Fifty-four Eskimo husky dogs will be taken aboard the ship shortly before sailing.

The mascot of the expedition will be a six-month, full-blooded Alaskan husky named "Ron" after Commander Ronne. He was picked up by Commander Ronne last summer near the Arctic Circle on the Navy's Nanook Task Force expedition.

Seeking primarily scientific data, the expedition will devote itself largely to a search for minerals, oil resources and hidden deposits of gold and silver. It will study cosmic radiation and the performance of electronic equipment, and compile a complete scientific backlog on climate, weather and terrestrial magnetism.

A complete study also will be made of bird and animal life, reaction of the human body to polar conditions and the direction of winds, water currents and the movement of continental glaciers.

The party expects to set up its principal base at Marguerite Bay, 1,000 miles due south of Cape Horn. It expects to have the ship made fast and unloaded by March 1—the Antarctic midsummer—to get ready for the winter freeze.

The party hopes to find and use the camp and equipment left by the last Byrd [Rear Admiral Richard E. Byrd] expedition in 1941. On that expedition Commander Ronne was second in command and had charge of the main base.

Farther south an operational base will be built at the tip of Palmer Peninsula. From there the operations will spread out to regions never heretofore seen by man, fanning out as far as the South Pole.

The commander of the Ronne Antarctic Expedition is the only explorer in the world to travel to the Antarctic and find his name already carved there.

When he first went down to the Antarctic in 1933, as ski expert under Admiral Byrd, his first chore was to make a little exploration tour with the admiral to find what was left of buildings from the first Byrd expedition in 1928.

He was startled to see what appeared to be his name carved in two-inch letters inside one of the old buildings. He leaned closer. There on the wall above a crudely made bunk, unmistakably, was his name: "Finn Ronne."

"Why, Finn," exclaimed Admiral Byrd. "Your father must have written that before he left for home on the first Byrd expedition. That's his bunk. But how did he know you would be coming down here?"

At 68, an age when most men are content to play dominoes, Martin Ronne had accompanied Admiral Byrd on the first trail-blazing expedition to the Antarctic to help found what later became known the world over as Little America.

Behind the senior Ronne was twenty years' exploring with the famous Norwegian explorer Roald Amundsen. He was on the famous little wooden rigged ship, The Fram, when Amundsen discovered the South Pole in 1911.

Britain Denies U. S. Asks It Quit Antarctic Base

LONDON, Dec. 24 (AP).—The British Foreign Office denied tonight reports that the United States State Department had requested the withdrawal of a British mission from the Marguerite Bay base in the Antarctic which Rear Admiral Richard E. Byrd built in 1940.

"The Falkland Islands Dependencies Survey party there are living in a British-built hut, where we also maintain a meteorological station," the Foreign Office said. "While every assistance would be given to any future visit by an American party to our station at Marguerite Bay or to any other of our stations in the Falkland Islands Dependencies, the supplies and seal meat there available will not suffice for more than a few additional persons and for no more dogs."

AUSTRALIA PLANS ANTARCTIC STUDY

18 Scientists Will Integrate Their Activities With Group of Britons Already on Way

THE NEW YORK TIMES.

CANBERRA, Australia, Dec. 19—The Australian Cabinet has decided to send a Naval vessel equipped with suitable aircraft on a short reconnaissance voyage to the Antarctic this summer to find a satisfactory ice-free base.

The Government will proceed immediately with plans for the exploration of Australian Antarctic territory.

North American Newspaper Alliance.

LONDON, Nov. 30—The twelve British scientists who are now on their way to the Antarctic in the wooden non-magnetic ship Trepassey soon will be followed by eighteen Australians.

The Britons, as was announced a few weeks ago, will be engaged in geological, meteorological, magnetic and other studies in the dependencies of the Falkland Islands, which include the South Shetlands and Graham Land.

Their activities no doubt will be integrated with those of the British officials who have been sent out to those regions to establish effective occupation by setting up law courts, postoffices and all the attributes of regular administration.

Now news has come from Australia that that Commonwealth intends to set up a permanent base in the Antarctic manned by eighteen men. No such Australian base ever has existed before.

Sir Douglas Mawson, famous polar explorer and adviser to the Australian Government, said recently:

"Britain has scientific parties working in Graham Land. But the war held up our plans for a permanent base south of Australia. We are anxious to go ahead because the exploitation of Australia's greatest dependency calls for immediate action. No expedition by the Commonwealth envisages a search for uranium."

It is learned that the Australian Cabinet will study the question of whether Government controls of atomic energy material apply to Australia's Antarctic possessions in the Victoria quadrant, notably in South Victoria Land.

Meanwhile Japan is activating her plans to hunt southern whales. Two refrigerated ships and five other whalers sailed recently from Nagasaki for the Antarctic.

The Russians, too, are in the race. They are currently fitting out a huge whale factory. It consists of the 14,700-ton ex-German tanker Vikingen, built on the Tyne River, England, in 1929 and seized by the British when Germany surrendered. She has now been handed over to Russia by the British Ministry of Transport and is being fitted out in the Mersey. She has been renamed the Slava.

An official Norwegian statement says that the Antarctic expedition which that country plans for 1948 will be purely scientific in character and will undertake geological, meteorological and geographical investigations. The expedition, which will have Norwegian, British and Swedish participation, is not connected with any "race for uranium."

WELLINGTON, N. Z., Dec. 28 (Canadian Press)—Admiral Richard E. Byrd's Antarctic expedition will win the race to the Pole region by default following the announcement yesterday that New Zealand is not interested in reaching the Antarctic first.

Prime Minister Fraser of New Zealand said the Dominion did not propose to attempt to forestall the United States Navy expedition although New Zealand plans to send a party of its own to the Ross Sea. The Americans do not recognize British sovereignty in the Ross Sea dependency.

Admiral Byrd's first ships are believed to be little more than one week's voyage from the polar ice barrier.

Mr. Fraser said that he was sure that the Dominion's rights in the area, which has been under New Zealand jurisdiction since 1923 would be respected by all engaging in the Antarctic expeditions. He added that Americans were welcome to enter New Zealand territory in peacetime as they were in wartime.

He said a departmental committee was investigating the practicability of establishing a permanent scientific station in the Ross Sea Dependency and that the sending of a New Zealand expedition would be considered in the coming year.

He said that it was hoped that New Zealand could cooperate with Britain and Australia in the furtherance of an international plan for polar research, the details of which are under discussion.

THE NEW YORK TIMES.

WELLINGTON, N. Z., Dec. 11 — Historians here concede that New Zealand's administration of Ross Sea is based on doubtful grounds and express surprise that foreign whalers have paid the license fees and royalties demanded by New Zealand. The ice barrier extends far out to sea, and it is believed Norwegian whalers paid royalties only because of their desire to maintain New Zealand as a base and to preserve good-will.

Chile Reasserts Right To Part of Antarctica

Calls Sovereignty in Claimed Area 'Indisputable'

SANTIAGO, Chile, Dec. 14 (UP). — Formally reasserting Chile's claim to part of the Antarctic Continent, the Foreign Ministry here said in a statement today that Chilean sovereignty in Antarctica was "as indisputable as that over any other part of the national territory."

It defined Chilean Antarctica as "the polar sector comprised between the 53rd and 90th Meridians west of Greenwich," adding that 'numerous historical, geographical, juridical, diplomatic and administrative titles, all dating many years back, establish the basis of our rights."

The statement announced that preparations were being completed to send the frigate Iquique and the transport Angamos of the Chilean Navy to Antarctica, "to establish contact with that most remote corner of the national territory and to determine on the spot all of the possibilities it offers to the country."

It confirmed that three Argentine naval officers would go with the Chilean expedition and that preliminary conversations with Argentina in 1941 had definitely established that "Chile and Argentina have unquestionable, firm and exclusive sovereignty rights over the American section of Antarctica."

The term American Antarctica was not used to mean any of the lands explored by United States expeditions, but referred to the general south polar regions facing the tip of the South American Continent.

The segment claimed by Chile is distant from the lands recently explored by the United States.

A decree issued in Nov. 6, 1940, fixing the exact Chilean boundaries in American Antarctica "did not create any kind of rights in our favor over a part of the polar zone, but merely determined the frontiers of our republic in lands which always have been Chilean," the statement said.

It concluded that the Government was "taking the greatest interest in the distant Antarctic zone, considering that it forms a prolongation of the soil of the motherland and that it contains important resources for the national economy."

French Explain Claim

THE NEW YORK TIMES.

PARIS, Dec. 14—The French Foreign Office has drawn the attention of the Paris press to the French claim to Adelie Land, in Antarctica, which officials here say the United States has refused to recognize.

The official French version is that in 1844 Dumont d'Urville discovered within the polar circle south of Australia a territory of 400,000 square kilometers, called it Adelie Land and took possession of it in the name of the French King. Nothing further happened until 1924, when Adelie Land "was included within the French colonial domain and attached to Madagascar," according to the French version.

The French say that in 1934 Britain recognized French sovereignty over this area.

Argentina Organizes Antarctic Expedition

BUENOS AIRES, Dec. 6. — (B.U.P.) — An Argentine navy transport will sail for Antarctica Dec. 10, it was reliably but unofficially reported last night. This was the first indication that Argentina was planning such expedition.

It was said that a Chilean naval officer would be invited to go with the Argentine group and that Argentina had accepted the Chilean invitation to send three navy officers with the Chilean expedition scheduled to sail for Antarctica in January.

BRITISH ARE FIRM ON ANTARCTIC AREA

Spokesman of Foreign Office Says Falkland Dependency Is Part of the Empire

THE NEW YORK TIMES.

LONDON, Dec. 28 — Regardless of the United States Government's refusal to recognize any territorial claims in the Antarctic, Britain has no intention of abandoning her claims to extensive areas on the South Polar continent, a Foreign Office spokesman said today.

The British Government regards territories in the Falkland Islands Dependency, including Graham Land and the Marguerite Bay area, as an integral part of Britain's colonial empire, it was stated.

An expedition is now on the way to Marguerite Bay, taking twelve scientists to relieve members of the British Falkland Islands Dependencies Survey, who have been there since 1943. Like other parts of the British Empire, the Foreign Office spokesman said these polar areas are "permanently occupied" and are administered under the British Colonial Office.

As evidence of this, it is pointed out in London that the Colonial Office issues postage stamps and whaling licenses for all Falkland Island Dependencies.

There is no tendency here to take too seriously the restatement of American policy in the Antarctic by Dean Acheson, Under-Secretary of State. The British attitude is that the United States Government's refusal to recognize any territorial claims by any country in the Antarctic is merely a piece of diplomatic strategy.

The British smile politely at the statement that the United States does not "formally" assert any territorial claims in the South Polar area and ask what would happen if some other nation attempted to take over Marie Byrd Land or Little America, "informally" claimed for the United States by explorers.

The British point out that there is nothing new in Mr. Acheson's statement or in the non-recognition policy itself. It is not considered unfriendly in London. On the contrary, the Foreign Office spokesman said today that there was a "friendly understanding" between the United States and Britain on the subject.

The British claims in the Antarctic go back to 1908, when the first letters patent were issued laying claim on Britain's behalf to the Falkland Island Dependencies. These claims were redefined in 1917. They include South Georgia, South Sandwich Islands, South Shetlands and Graham Land. The exact extent of the claims is deliberately left vague.

The United States is not the only country to contest Britain's claims. Argentina has never recognized Britain's claim to the Falkland Islands and the Argentine Government claims all islands and lands between the Argentine mainland and the South Pole.

Chile also makes claims in the Antarctic that overlap Britain's claims.

19 Nations Write New Set Of Rules for Whale Industry

By Neal Stanford
The Christian Science Monitor

WASHINGTON, Dec. 3 — The whaling industry got a new set of laws today, which, while not airtight, are expected to do much to keep the whale from becoming extinct.

Nineteen nations, after 12 days of day and night consultation here, wrote these new rules which:

1. Set up an international whaling commission to handle the administrative work of international control.

2. Include a code of regulations on how whales should be caught, where they may be caught, and what whales could be caught.

The conferees, however, could not agree on uniform penalties for illegal killing of whales, even when punishment was to be left to the governments of the parties implicated. In fact, the entire whaling agreement is of a voluntary nature, with each government promising that its nationals will observe agreements reached, but no international group with the authority to assure observance or power to punish.

24-Hour Inspection

The accomplishments of the meeting, in spite of this, are considered extensive by those acquainted with the problems of whaling. Thus they did agree there should be 24-hour inspection aboard those factory ships which go out whale-hunting for months at a time. If there is a weakness in that regulation it is that the inspectors do not represent any international body but are representatives of the governments whose citizens operate the factory ships. Thus, in a sense, the umpires are part of the team operating the ships. One must rely on their word (and this applies to practically all other parts of the agreement) that the convention and protocol signed here yesterday are being observed.

It was also agreed there should be full reports on what whales were caught, when, and how. Everything was done to encourage exchange of information on whales and whaling. The catching of whales for research was specifically excluded from the rules on whaling—and while this exception could be abused, so could most of the other provisions of the agreement.

There was also agreement on definitions, which is important, since there are some nine major types of whales and more than 50 minor differentiations, with rules on capture varying with the type of whale.

Formula Devised

Where limits were put on whaling a formula was devised on how to estimate when the quota was reached. Thus when limits in one area were measured in Blue whales it was agreed that one Blue whale equaled two Fin whales, or two and a half Humpback whales, or six Sei whales.

The Conference came up with a number of resolutions and recommendations. The Soviet delegates (who were not present at the opening of the conference but took an active part once they appeared) made three requests for special treatment since they had missed the gun on the hunting season just opened. They wanted, and the Conference recommended they get: the right to measure their four-months season from the time they got their factory ship into the antarctic; the right to catch more whales than the limit of 16,000 Blue-whale units permits just for this season; the right to catch whatever Gray whales they wanted in the Bering and Chukotsk seas if the meat was used for the "aborigines" of the area.

The delegates agreed that "it is inevitable that some whales will be taken illegally" and therefore called for certain latitude in assessing penalties. But while they could not agree on a uniform system of penalties they did agree all powers should make them sufficiently severe "to discourage illegal killing or taking of whales."

The agreements reached at this meeting were really a codification of previous agreements as well as an updating and unifying of rules for whaling. Amendments in the future it was arranged should be made by, the IWC, but with a three-quarters vote necessary to get any substantial changes made—such as open and closed seasons, open and closed waters, size limits for each species. However no power had to accept such amendments until it individually ratified them, so that in effect each power had a veto over amendments — at least as far as they applied to it.

While the code book provides no enforcement agency, it does among other things:

1. Forbid killing calves or suckling whales or female whales accompanied by young.

2. Forbid using factory ships or whale catchers to catch whales in certain areas.

3. Forbid catching more than a given number of whale units in certain waters.

4. Forbid catching whales below specified lengths.

5. Require immediate reporting by radio of each whale caught when caught.

6. Establish the remuneration for crews and gunners not just on number of whales taken, but on species, size, yield of each whale.

7. Require full reporting by each factory ship or land station on whales caught, species, oil and other products derived, length, etc.

'Whaleburger Steak' Put On London Bill of Fare

LONDON, Nov. 29 — Whale meat made its first appearance on a London menu today when "whaleburger steak" was served at a luncheon of the Institute of Refrigeration. It was part of an experimental consignment of ten tons, brought from the Antarctic recently in the whaling ship Empire Victory.

The meat was served in form of chopped steak with sauce. Those who ate it claimed that it even tasted like chopped steak. There was no flavor of fish. That was why they called it "whaleburger."

14 Whaling Fleets Await Antarctic Hunting; Animals' Palatable Flesh to Ease Food Lack

North American Newspaper Alliance.

LONDON, Oct. 30 (By Airmail) —World shortages in meat, oils and fats are behind the hunt for whales in Antarctic waters. For the first time since the end of the war a fleet of fourteen floating whale factories attended by more than 130 whale-catching vessels is deploying in far southern waters, making ready for Dec. 8, when the hunting begins officially. The season ends in March.

Norway, Britain, South Africa, Australia and New Zealand are the chief whaling countries in a trade estimated to bring them $200,000,000 annually. This year they are sending a fleet totaling 300,000 tons. Three land stations also will be used. About 6,000 men will take part, of whom more than 4,300 will be Norwegian. Seven of the fourteen expeditions will be Norwegian, four British, two Japanese and one Dutch.

The Australians and New Zealanders do not possess floating factories; they tow the whales to land stations in the extreme south of Australia, usually in Tasmania, and in New Zealand. The Dutch use a land station in the South Shetlands and the South Africans have a station of their own in one of the remote islands owned by the Union of South Africa far south of the Cape of Good Hope.

This season a great effort is to be made to prepare whale meat for human consumption. Hitherto the body of the whale has been put to industrial use by turning its blubber into oil and its meat into meal for cattle food. Last year an Anglo-Norwegian company found the meat was entirely palatable as a human food. One man said it tasted rather like beef. The younger animals produces the best meat, of a light color and with no fishy taste. Older whales produce darker meat, and the older the whale the greater the likelihood that the meat might taste fishy.

It is planned to freeze the whale meat quickly in pieces of about forty-five pounds, which will be brought to England. The difficulty of handling whale meat in that form lies in the fact that there are few refrigerated ships in which to carry it.

A curious situation has arisen from the desire of the Japanese to re-enter the whaling business. They always have had a bad reputation in whaling circles as being wasteful in slaughtering whales and failing to keep to any agreement on the size of whales to be killed.

Last August it was announced from Tokyo that the Japanese had received permission to participate in the Antarctic whale fishing. Representations at once were made in Washington against the action of the United States authorities in Japan in granting this permission. Particularly bitter complaints were made by Australia and New Zealand, and last September the Australian Government was informed that the permission given by Gen. Douglas MacArthur was an entirely temporary measure to assist the Japanese to meet essential food needs. Japanese whaling, he said, would be controlled according to the existing international agreement.

Latest reports are that the Japanese may be allowed to continue in the work, but the Allies will take the oil of the whales they catch, allowing the Japanese to keep the meat. On the other hand, many New Zealand and Australian whaling crews say they will sink any Japanese boat suspected of unfair whaling.

First Ships Reach Capetown

CAPETOWN, South Africa, Nov 4 (Reuters) — The first whaling expedition to the Antarctic this season — the 13,800-ton factory ship Norhval and eight whalers— reached Capetown today. A Japanese whaling expedition is due to leave for the Antarctic Nov. 11.

Expedition Plans to Test Antarctic Whale Meat

Tanker Sailing South Also Will Store Oil From Mammals

An expedition which will test Antarctic whale meat for its suitability for the dinner table and study the animals' diving habits to get ideas for future submarines, is under way. This was learned with the sailing of the Norwegian tanker Anna Knudsen from here Dec. 26 She will rendezvous with four whale-factory ships in the Antarctic, where she will mother them by providing fuel and stores and taking aboard whale oil.

An officer of the vessel said that meat from North Atlantic whales is already being used as food for humans in several North European countries and in Britain this flesh is often called "whaleburgers." The meat gained acceptability during the war when cattle meat and many other foods were scarce, although whaling folk themselves have been eating the flesh of their catches for centuries, the officer said.

North Atlantic whale meat must be soaked in vinegar to remove the oil, and if prepared right, tastes just like beef, the officer said. Flesh of the Southern sea whale is fattier in content than that of Northern varieties and it will be tested by the expedition to determine whether it can be treated to make it acceptable to humans.

Japanese Whaling Trip Defended by MacArthur

He Says Food Need Justifies Antarctic Expedition

TOKYO, Aug. 22 (UP).—General Douglas MacArthur today defended his decision to send a Japanese whaling expedition to the Antarctic as "an emergency humanitarian move" to provide the Japanese with food.

At the last Allied four-power council meeting the United Kingdom representative, W. MacMahon Ball, demanded to know why the council had not been consulted about the expedition. The American representative, George Atcheson jr., explained that there had not been time to call a meeting because an immediate decision had to be made to allow the Japanese to prepare ships.

A spokesman for MacArthur said today the operation would not infringe upon the rights of any nation and could not be considered "in any sense" a Japanese enterprise. He said the expedition would be entirely controlled and directed by occupation authorities.

Norway Proposes Loan Of Whalers to Russians

Reds Ask for Permission to Hunt Beyond Season

LONDON, Nov. 30 (UP).—The Norwegian Cabinet has approved a proposal to lend whalers to Russia for use this year in the Antarctic provided Russia signs international whaling treaties and agrees to abide by hunting laws now accepted by other nations, a report from Oslo said today.

Concurrently, Russia appealed to the International Whaling Conference, which convened at Washington on Nov. 20, for permission to hunt beyond April 7, the season's end, asserting she would be unable to start with other nations when the season opens Dec. 8.

The Norwegian decision was unprecedented. A law prohibits Norwegians from working for other nations' whaling industries, excepting the British, since British and Norwegians jointly own United Whalers, Inc., one of the largest enterprises in the Antarctic.

SOVIET ON WHALING TRIP

10 Ships Start for Antarctic—Explorer in Command

MOSCOW, Dec. 25 (AP)—A tenship whaling flotilla, headed by the well-known Soviet explorer, Ivan Voronin, departed from northern Russia today for the Antarctic, Soviet newspapers reported.

The fleet, composed of nine whalers and one large vessel carrying equipment, will be met off Gibraltar by the Soviet tanker Pamin, which will supply the ships with fuel during the voyage.

Russia had announced earlier that she would send an expedition to the Antarctic, but it was not known whether this was a reference to the whaling ships or whether it meant a separate scientific expedition.

The whaling factoryship Balaena showing the aperture in the stern through which the whales are hauled aboard.

British Whaling Ship Will Hunt with Radar

LONDON, Dec. 7 (UP).—A thirty-three-year-old scientist is leading an expedition that has set off for the Antarctic in the whale factory ship Balaena to hunt whales with radar.

The expedition has a two-fold objective: to examine the possibilities of using lean whale meat for human consumption, and to study the diving characteristics of whales to see if they will furnish any ideas that may be utilized by the Royal Navy for its submarine craft.

The expedition, under the auspices of the Department of Scientific and Industrial Research, is led by Dr. R. A. M. Case, of the Royal Navy Physiological Laboratory.

Dr. Case has been studying the effects of high temperature, humidity and pressure on submarine crews. Before sailing, he said, "I am interested in the general physiology of the whale and the body mechanism which enables this curious mammal to lead a submarine existence. This subject is connected with the project of studying whale meat as possible food, because the character and composition of whale muscles are adapted to the requirements of its underwater existence."

Case said there were indications that as indirect consequences of this submarine adaption, the proteins of whale meat are of exceptional value for growth in comparison with the meat protein of land animals. A research team will make a detailed study of the catch and Case said it is hoped that information obtained in conjunction with data collected by inspectors of other vessels may enable an accurate estimate of the characteristics of lean meat of the present whale population in the Antarctic.

The 15,000-ton Balaena, the most modern whaler factory ship afloat, is equipped to handle a catch of 1,500 whales during her long cruise and will act as mother ship for a fleet of ten whale catchers. The factory contains one of the largest whale oil producing plants and is fitted with the most elaborate by-products plant yet installed in a whaler.

A quick-freezing plant has been installed to freeze the choicest cuts of whale meat for human consumption. The frozen meat will be stored in the ship or transferred to refrigerator vessels.

In addition to radar, the Balaena is equipped with asdic, elaborate radio and three amphibian planes.

Eighty members of the crew of 550 are British. The remainder are Norwegians under the command of Captain Reider Pedersen.

The British whaling industry will have nine different expeditions in the Antarctic this winter, and General Douglas MacArthur has authorized the Japanese to operate two factory ships, twelve catchers and seven transports during the current season. The catch obtained by the Japanese will go into an international pool.

Before World War II the international whaling industry had thirty-eight factory ships, of which thirteen were Norwegian, twelve British, six Japanese, five German, one Panama and 1 United States.

DUTCH WHALER READY TO GO TO ANTARCTIC

AMSTERDAM, Oct. 27 — The whaler Willem Barendsz will leave Amsterdam today in search of 20,000 tons of whale oil.

The whaler, which up to seven months ago was the Swedish tanker Pangothia, is expected to reach Antarctic waters with eight former Norwegian catcher-ships to assist in opening the whaling season on Nov. 24.

Minister of Commerce S. L. Mansholt stressed today the importance of this new Dutch industrial venture, which was planned directly after the liberation and made possible by a Governmental loan, with regard to the critical position of the Netherlands in supplies of fats. "The Netherlands supply of fats for 1947 still is not covered," the Minister declared, "even with the 20,000 tons of whale oil this ship eventually will produce."

Therefore next year the Netherlands plans to send a fleet of four whalers to the Antarctic. The building of three others already has been started in Amsterdam and Rotterdam shipyards.

The Willem Barendsz is the first Netherlands merchantman to carry radar apparatus. Also aboard are two amphibian planes to be used to sight whales and a complete oil factory able to transform one whale an hour into oil and bones.

Because the Netherlands lacks an experienced whaling crew, seventy Norwegians and Faroemen were enrolled. Norwegian law prohibits its whalers serving foreign companies and a result may be their loss of citizenship.

SHIPS WITH 'EYES' CONQUER ARCTIC

Navy Shows Advantage of Icebreaker-Plane Team in Navigating Ice Fields

WASHINGTON (NANA) — Besides serving as a base for extensive air exploration over the northern tip of Greenland and the rugged mountains of Grant land, the group of five United States Navy ships which recently completed naval maneuvers in the farthest north ever conducted, developed and proved the practicability of Arctic navigation for a small fleet by combining icebreaker operations with air observations.

It was able to locate ice-free harbors and navigate in the dangerous, ice-packed waters of Lancaster and Melville Sounds which constitute the shortest, but probably not the most practical, "Northwest Passage," the goal of Arctic explorers since the days of John Cabot, Henry Hudson and Sir Martin Frobisher.

The expedition demonstrated the high probability of ships from the United States being able to bring supplies at least once a year to isolated weather stations that the United States Weather Bureau plans to establish on Arctic islands in the next few years.

Most Arctic explorations have been carried out with single ships. Some of them, notably under the command of Admiral Robert E. Peary and Capt. Sir Albert Markham of the British Navy, have been able to push still farther north, but required two or more summers to do so.

Five Ships in Fleet

The five United States Navy ships put out from Boston early in July under the command of Capt. Richard H. Cruzen, commander of the Bear on the last Byrd expedition to the Antarctic. The little fleet consisted of the Coast Guard icebreaker Northwind, the Whitewood, built as a netbreaker for beach invasions and reconditioned as an auxiliary icebreaker; the seaplane tender Morton Sound, with two large ocean patrol planes, and two cargo carriers.

It proceeded directly north through Davis Strait and Baffin Bay to the little Greenland harbor of Thule, where the Weather Bureau was setting up the first of its proposed chain of observatories in the Far North.

Thule, it was found, was an ice-free harbor. The prevailing winds are such in summer that the Baffin Bay ice drifts past the harbor, leaving it unblocked. This was a welcome discovery, for it probably will be necessary to resupply the base by ship once a year. It also afforded a splendid seaplane base.

From Thule two long air reconnaissance flights were made. One passed over Cape Morris Jessup, Peary Land, the most northerly point of land in the world, to Cape Rassmussen on the northeastern tip of Greenland. It confirmed the reports of Peary that a considerable area of the northern coast of Peary Land, the most northern portion of Greenland, is free of snow during the summer and may have some vegetation.

Another flight proceeded across Kane Basin, named for the first United States naval officer to explore the Arctic, and then over Grant Land, the northern part of Ellesmere Island. This is a land of very rugged, fantastically carved mountains.

The expedition then proceeded southward into the waters of the "Northwest Passage," entering the straight, deep Lancaster Sound between North Devon Land and Baffin Land. There was a narrow passage relatively free of ice on the northern edge.

Planes Used as Eyes

It was expected from previous reports that an ice-free harbor would be found in Dundas Bay, on the south shore of Devon Land. This, however, was clogged with ice, and for the first time the great value of using airplanes as eyes for Arctic exploration was demonstrated.

After a long search, an excellent summer harbor was located at Tay Bay, on the northwest corner of Bylot Island. This was used as a base during the remainder of the expedition.

Then the Northwind was taken into Melville Sound, north of Victoria Land. Here very bad pack ice was encountered which was negotiated by means of the icebreaker. A landing was made at Winter Harbor, Melville Land, one of the sites proposed for a permanent Weather Bureau station.

The difficulties met by expeditions for 800 years in trying to negotiate a northwest passage through Melville Sound were obvious. Even with the equipment of the present expedition, Captain Cruzen points out, it would have been very difficult if not impossible to have pushed a ship through McClure Strait, which marks the end of Melville Sound west of Winter Harbor.

Air observations indicated, however, that there was open water through Prince of Wales Channel, a narrow strip between Banks Land and Victoria Land. By using this route, a northwest passage has been made three times by a single vessel.

New Method Shows Worth

The great advantages of the new method of Arctic navigation are stressed by officers of the expedition. A ship in the ice must constantly be looking for leads through open water. In the past there has been no way of knowing how far such a break in the ice might extend. Perhaps after two or three days of sailing, a ship would run up against a solid wall of ice and be obliged to turn back.

But a plane may show that the block lasts only for a few miles which can be cleared by an icebreaker. Or open water beyond a few miles of ice may be seen when no lead could be found otherwise. This method will save days of fruitless probing, such as has been the great obstacle of Arctic exploration in the past and has forced expeditions to stay in the ice for two or three years in order to accomplish their mission.

It also was demonstrated that an icebreaker such as the Northwind can easily open up a channel through ice eight feet thick—and, for short distances, through much thicker ice.

NAVY PHOTOGRAPHS TERRAIN IN THE FROZEN NORTH

Revealing an unusually long and "trailing" glacier from its mouth, this view was made from a PBM plane as it flew west up Frederick Hyde Fjord, Peary Land, on the return leg of a 1,400-mile flight during an expedition conducted by a joint United States-Canadian group in search of navigational and weather data. The party went within 450 miles of the North Pole. (U. S. Navy)

Say U. S. Sub Sails North of Greenland

Copenhagen, Oct. 16 (AP)—The newspaper Berlingske said today an American submarine had explored the possibility of going north of Greenland through the narrow strait between Ellesmere land and the northern tip of Greenland.

The paper said the route would open a new way to Russia and Siberia.

The submarine started from Thule where the Americans are establishing a meteorological station, Berlingske said, and proceeded under ice 50 feet thick in places.

Navy Cruises North 950 Miles Off Pole

Ships Penetrate Ice Fields Into Greenland Harbor

WASHINGTON, July 28 (AP).—A small contingent of Navy and Coast Guard ships has penetrated Arctic ice fields into the Greenland harbor of Thule, only 950 miles from the North Pole and the farthest north any large ship has reached at this season of the year, the Navy Department disclosed today.

Under command of Captain Richard H. Cruzen, who was second in command to Rear Admiral Richard E. Byrd in his 1939-'41 Antarctic expedition, three ships broke through the ice fields Monday, July 22, and steamed into Thule, which is on Smith Sound above Baffin Bay.

The contingent was spearheaded by the Navy converted icebreaker, the U. S. S. Whitewood, commanded by Lieutenant Commander William H. Daly, another member of the Byrd expedition. The Coast Guard icebreaker North Wind and the naval seaplane tender Norton Sound followed in the Whitewood's wake.

As the ice retreats, the ships are scheduled to continue working northward in an effort to amplify existing knowledge of navigational and weather conditions in the Arctic and to provide cold weather routine training for the crews.

The Norton Sound, commanded by Captain Alan Smith jr., carries two patrol planes for reconnaissance over ice fields ahead of the ships. The three ships left Boston early this month. Two small supply ships, the U. S. S. Alcona and the U. S. S. Beltrami, are en route to join them.

Capt. Richard Hoyle, Coast Guard, who previously was engaged in the North Atlantic International Ice Patrol, commands the North Wind.

Labrador Explorers Return

BOOTHBAY HARBOR, Me., Aug. 2 (AP).—Sailing in on the tail of a northeast storm, Commodore Donald B. MacMillan, Arctic explorer, came back today aboard the schooner Bowdoin from a 3,500-mile trip to northern Labrador waters with a crew of scientists, naturalists and business-men sailors who had gathered ornithological data and specimens. Commodore MacMillan, completing his twenty-fourth voyage to the northland, reported he had not sighted the "Kumlein gull," a bird which some ornithologists contend does not exist but which Commodore MacMillan believed he had seen on an earlier trip.

Greenland Patrol.

Coast Guard headquarters has issued a book entitled "Greenland Patrol" describing the work of Coast Guard vessels and units in Greenland waters. This volume contains 200 pages and many illustrations.

Americans and Danes Man Far North Post To Warn Continent of Chunks of Icy Air

North American Newspaper Alliance.

WASHINGTON, Dec. 7—The United States Weather Bureau has established its farthest northern station near the tiny Eskimo village of Thule in Ingerfield Land on the west coast of Greenland, about 950 miles from the North Pole. Reports are received four times daily.

The station is manned by eighteen men—nine Americans and nine Danes—and will be maintained by arrangement with the Danish Government.

The Americans are volunteers from the Weather Bureau staff, three of them war veterans, who have agreed to remain a year in this isolated spot. They took with them provisions for a year. Mail will be dropped by plane once a month.

In case of emergency, it will be possible to drop supplies by parachute. There is an emergency landing field near the station which will be used, however, only if it is necessary to evacuate a member of the staff who has been taken ill.

This station, set up late last month, is North America's farthest outpost against cold waves. Great masses of cold air pile up in the Arctic throughout the winter. When they get heavy enough, big chunks break off, like cakes of ice from an iceberg, and slide down over the North American Continent. They usually break over the rim of the Arctic, either by way of the basin of the Mackenzie River, east of Alaska, or over the edge of Hudson Bay.

The major job of the observers will be to watch the daily building up of the extremely cold air in the Arctic area and to determine when it reaches the critical size at which a break-off of chunks is near.

The observations are being radioed to Washington every six hours. As soon as the station is better established, it is hoped to get messages every three hours, or even more frequently at critical times, according to Comdr. F. W. Reichelderfer, chief of the Weather Bureau.

There is a vital need, it is stressed, for a string of similar stations across the Arctic from Alaska to Greenland between latitudes 75 and 80 north. Arrangements are being worked out with Canada, which owns all the land masses in the area, for the establishment of this string. The stations would be able to give immediate warning when a "chunk of cold" was about to slide over the Arctic rim.

One such station, which would form part of the string, is in operation at Arctic Bay in the Boothbay Peninsula, near the Magnetic Pole. It was set up during the war and was of invaluable aid in making weather predictions for North Atlantic flying. Other stations are contemplated at Winter Harbor on Melville Island, on Banks Island and in Ellesmere Land.

Some years ago, a string of robot weather stations around the Arctic rim was set up and automatic apparatus devised. The stations have not proved very successful in operation, however, and research is in progress to perfect them. Operating about three months without servicing these would have a range of some 600 miles.

The Russians have an apparatus, recently shown to American observers, which is described as very practicable for such stations. They probably would be willing to allow other nations to copy its design. They have been extremely cooperative in all sorts of meteorological observations, Weather Bureau officials say, and exchange data daily with Washington.

Greenland's Arctic Influence

THINGS are really "cooking" up in West Greenland, according to Dr. Max Dunbar, who has arrived at McGill University to take over the post of assistant professor of zoology after serving as acting consul for Canada in Greenland since 1941. An authority on marine biology, he carried out research work while in Greenland and brought back many sea specimens with him.

A rise in temperature of the water off West Greenland, caused by a startling change in the Gulf Stream and eddy currents, has changed the whole economy of West Greenland from hunting to fishing, he said. Codfish in prodigious numbers are seen far up the coast where they never were noted before. Whales and seals have moved farther north to escape the warmer waters.

Two other such periods, but of much shorter duration, have been recorded in the past century—in the 1820's and again in the 1840's—each period lasting about a decade. These periods were followed by drops in temperature, but the present one seems to be on a more permanent basis, having already lasted nearly three decades.

One of the chief "exports" of Greenland, Dr. Dunbar pointed out, is meteorological information. Knowledge of Arctic air currents in the Greenland area is of vital significance to Northern Europe, and to a lesser extent, this continent, the zoologist pointed out.

Dr. Dunbar, who was accompanied to Greenland by his wife, a Montreal girl, is highly enthusiastic about the north country. Air travel, he stated, may profoundly modify people's conceptions about the Far North, as future transport lanes may well cross the Arctic Circle.

Opportunities for research were opening up and in this connection he praised the work of the Arctic Institute of North America, which now has its Headquarters at McGill University.

Dr. Dunbar, a native of Edinburgh, has had previous teaching experience at McGill. He gained his university training at Oxford and at Yale University, where he studied on an exchange fellowship. A field research worker he has travelled into the North several times, including two trips on the SS. Nascopie as marine biologist.

TROOPS IN GREENLAND DISCUSSED BY ARMY

WASHINGTON, Oct. 15—In releasing today a report on climatic conditions in Greenland, the War Department Public Relations Division called attention to a topic about which both War and State Departments usually seek to avoid publicity.

The release dealt with a report by Dr. Hoyt Lemons, Quartermaster Corps Geographer and Climatologist, who accompanied a naval task force to the Arctic as an Army observer. It stated that "troops stationed on the western coast of northern Greenland and other far-northern coastal areas during the summer months require cool-climate clothing and a new type of footwear to give protection against water and at the same time withstand rough terrain."

"The Quartermaster Corps," it further stated, "is working on a project to determine at first hand the environmental conditions in every part of the world at every season of the year so that proper clothing, shelter and food may be designed for the most efficient maintenance of troops."

The American troops remain in Greenland by tacit consent of the Danish Government.

Stranded Greenland G.I.s Home, 11 Months Late

Thwarted for eleven months by a close combination of Greenland's geography and weather, eleven soldiers scheduled to be discharged from the Army last September finally arrived at Mitchel Field, L. I., Aug. 28

The men had been holding down a remote weather station operated by the Army Transport Command at Walrus Bay on the east coast of Greenland, 300 miles above the Arctic Circle, since July, 1945. On Aug. 9 a Coast Guard iceship was finally able to crack through the ice-caked waters to relieve the men. The bay is inaccessible except for a few weeks during the year.

Although they had reason for a good share of G.I.-styled gripes, the eleven soldiers showed no frustration, seemed to feel no remorse, expressed no bitterness over their ordeal and had no complaints. They had accepted their situation as inevitable, they said. When they volunteered for the task they understood it would be for a year. When the war ended before they had hardly begun their lonely tour the Army would have brought the soldiers back to the United States for discharge, but it was virtually impossible to reach them. The boys hung on. They were lonely, but determined not to feel sorry for themselves. The Army expressed its appreciation by sending a C-54 Army transport to Narsarssuak to pick up the men.

3 Army Task Forces Testing Defense Techniques in Arctic

By James G. Simonds
New York Herald Tribune

WASHINGTON, Nov. 30.—A steadily increasing proportion of American military resources and effort are being directed toward the development of an Army capable of defending the northern approaches to the United States and fighting in intense cold.

Three Army groups, Task Force Williwaw in the Aleutians, Task Force Frost in Wisconsin, and Task Force Frigid in Alaska are carrying on tests of equipment and weapons this winter as a part of the nation's development of a cold-weather force.

These maneuvers mark only the small beginnings in meeting a gigantic responsibility that faces the American Army. To be able to defend the nation from any attack from the north, the armed forces also are undertaking a scientific program of study of northern conditions that may require years to complete.

Last week 150 soldiers and civilians left the engineer training center at Fort Belvoir, Va., for Churchill, Canada, where they will pass several months working with Canadians in testing American equipment in the bitterest cold. In Alaska, the Air Forces are carrying on extensive tests on methods of operation in cold, while other branches of the Army are translating the lessons from such minor expeditions as Operations Muskox in Canada into modifications of American equipment to make it suitable for northern operations.

Unfortunately for the American armed forces, the United States has lagged far behind other nations of the world in scientific research on Arctic and sub-Arctic regions. Now that these regions are becoming increasingly vital to American defense, most of this research has to be started from scratch.

American expeditions are making a careful extensive study of weather conditions in Alaska, while the Army's mapping service is taking a considerable part in the program by mapping heretofore unknown regions in Alaska and Greenland.

Thus far, the Army has taken only the first step in its program for development of northern defenses. Its 4,000 men engaged in maneuvers, as well as its special groups, such as the engineers at Churchill, are testing for the most part standard equipment, to see how it can be modified to operate in cold. On the basis of these tests, Army experts will develop special cold-weather vehicles and weapons. These will be used to equip future cold-weather forces, which in turn will carry on more extensive test exercises.

Even the limited knowledge which Army experts on the North now have has convinced them that their most important job is the development of methods to protect the individual soldier against the cold. Northern operations may require entirely new types of tanks, trucks, guns and other heavy equipment, but Army and civilian researchers are expected to overcome such development problems. But the task of dressing and training the individual soldier is far more difficult problem.

The best heavy clothing now available for American troops provides weather protection when the temperature has a mean average of about 14 degrees above zero, if the man is not doing any heavy work. If troops dressed in this manner were exposed to a zero temperature for forty-eight hours in foxholes, Army experts estimate that they would be 100 per cent weather casualties.

Tests during the war disclosed that beyond a certain point, an increase in clothing resulted in a loss of body heat, because of the increase in the surface exposed to the air. The most efficient thickness of clothing varies from a quarter of an inch for gloves to from five to six inches of clothing on the body.

With these limitations in mind, it is essential that the Army develop a type of warfare that does not necessitate exposing troops to intense cold for more than a few hours at a time. In the Far North a soldier might be sent to the rear after fighting only for a part of a day, instead of staying in the thick of it for weeks, as some troops did in the last war.

No American forces operated during the war where the mean temperature went as low as 14 degrees above zero. The weather in western Europe is considerably warmer. It is only in Russia that such mean temperatures exist, and it is interesting to note that the farthest German advance, roughly on a line from Leningrad in the North to Stalingrad in the South, is almost exactly the temperature line marking the beginning of the eastern region having a mean temperature of 14 degrees above in the month of January.

It also is interesting to note that in his invasion of Russia in 1812 Napoleon also reached this same temperature line before the intense cold caused the defeat of his improperly clothed and equipped soldiers.

Lessons from the campaigns in Russia as well as information from the winter war in Finland in 1939-'40 provide most of the available data on actual fighting in extreme cold. With this information as a guide the American armed services are beginning their development of a defense force for the Far North.

The Army's Task Force Frigid is assembling at Fairbanks (1) for tests of equipment and men in sub-zero weather. Another group, Task Force Williwaw, is on the Aleutian island of Adak (2) for similar exercises, while a third, Task Force Frost, will work at Camp McCoy, Wis. (3). The northern groups will be operating in about the same latitudes as those along the Russian-Finish border (4), where the Soviet Army obtained experience in cold-weather operations during the recent war.

NAVY SUBMARINE TEST IN ARCTIC REVEALED

WASHINGTON, Oct. 10 (AP)—The Navy today issued a belated account of a secret cruise July 15 to Aug. 22 which took its submarines on active duty closer to the North Pole than ever before.

Anti-submarine detection beams are seriously deflected by layers of sea water which vary with temperature, and the Navy said much information on this effect was obtained near Arctic ice floes.

Operating with four submarines of the Pacific Fleet on the "training and familiarization" trip were an undisclosed number of long-range four-engine patrol bombers.

"This and other recent submarine cruises into Arctic waters have marked a resumption of periodic training cruises interrupted by the war," the Navy said. It did not elaborate on "other recent submarine cruises."

The submarines, Trumpetfish, Blackfin, Tusk and Diodon, were blocked by the solid wall of the ice pack on their northward course above the Bering Strait at 70 degrees 21 minutes north, some 250 miles southwest of Point Barrow, Alaska.

A naval authority said this was the farthest that North American submarines ever had gone on active duty.

The reconditioned Navy submarine Nautilus which Sir Hubert Wilkins used for Arctic exploration in 1931, however, went considerably farther north at Spitzbergen.

ALASKA SEALS INCREASE

Census Shows 3,386,008, a Rise of 7 Per Cent From 1945

WASHINGTON, Aug. 25 (AP)—The Alaska seal herd, once facing extinction, now contains 3,386,008 animals, an increase of 7.31 per cent over the 1945 census of 3,155,268.

This year's census was taken Aug. 10, and the results announced yesterday by J. A. Krug, Secretary of the Interior.

When the Government took over active management of the herd in 1910 it contained only 132,279 animals. While being developed to its present size through the limiting of killings to 4-year-old "bachelors," and other conservation measures, the herd had produced 1,367,322 skins at a profit of more than $10,000,000 to the Government.

During the 1946 season, which closed Aug. 8, 54,523 skins were taken. This is a decrease of 12,441 skins from the 1945 take. This was attributed to the late arrival of the herd on the Pribilof Islands.

Eskimo Belief

Eskimos are said to bury a dog with a dead child, in the belief that the dog may guide the child in an other world.

PEACE EXTENDS ARCTIC EMPIRE OF THE SOVIET

Moscow—Peace has brought renewed development for the vast sub-Arctic empire which Russia began to build on the northern coast of Siberia before the war.

Large settlements of pioneers have long been established in the vast area for the handling of timber, furs, coal, oil and rare minerals. A constant procession of ships steamed during the warmer months from Archangel to Vladivostock and back.

The war slowed the program. Although supply ships still made the Arctic run and planes took out necessary supplies, all except necessary energies were turned directly toward winning the war.

With the fighting ended, almost every day brings a report of some ship voyage or airplane flight carrying out polar exploration on a scale new to history.

SETTING UP STATIONS

Pilot M. A. Titlov has made the first map of the ice pack, which will be of great benefit to spring navigation across the top of Siberia. The ice-cutter Lenin reached Weise Island in the Kara Sea, to establish a new geophysical station. On another island the first automatic radio meteorological station has been established. Still another automatic station will be installed on a drifting floe.

The Soviets have opened a 4,977-mile Arctic flying boat route with regular schedules from Moscow through Archangel, Igarka, Tiksi Bay, Cape Schmidt to Provideniza Bay, around the tip of Siberia opposite Alaska. The planes carry passengers and freight and the round trip takes six or seven days.

Weather observations and ice mapping make possible prediction of the proper time for ships to enter the various passages along the Siberian coast, notably between the New Siberian Islands and the mainland, with others to the southward of Svernaya Zemlya and Novaya Zemlya.

RICH RESOURCES

The Arctic is paying off through gold, silver, platinum, phosphates, furs, fish and timber. Cities have been established, notably Kirovsk, in Lapland, with a 40,000 prewar population, and Igarka, with at least 20,000, in the timber region of the Yenisei River.

But just as important is the opening of shipping around to eastern Siberia which is now expected to boom with the Soviet regaining southern Sakhalin and other lands and ports seized by Japan.

Russians have long dreamed of developing the north and even bought the world's first ice-breaker, the Yermak, from England in 1898, but nothing important was done until the Soviets started. The ice-breaker Siberiakov smashed through in 1932 from Archangel to the Pacific, the first such achievement in history.

Before the war more than 100 ships were operating in Arctic waters and an average of 14 sailed all the way through each season. Within a few years the Soviets expect scores of ships will make the full passage.

The Arctic Institute at Leningrad, averaging 600 students, supplies trained personnel for the work.

Icebreaker Starts for Arctic

The Christian Science Monitor

A Russian move calculated to improve the Soviet hold of Arctic water is seen in the departure from Vladivostok of the icebreaker North Pole with a group of experts under Prof. Igor Maksimov, Deputy Director of the Arctic Institute.

According to the Soviet Information Bulletin the object of the expedition, the seventh under Professor Maksimov, is to push through for the first time in history from East to West by the Northern Sea Route.

The icebreaker expects to crash its way round Wrangel Island, the New Siberian Islands and the North Land. Specifically its object is to study the areas of the Chukotsk Sea, the East Siberian Sea, and the Laptev Sea.

ARCTIC TEAMS WATCH SOVIET 'WEATHER' MEN

REYKJAVIK, Iceland, Sept. 25 (By Airmail) (NANA)—Aided by a flotilla of sixteen British minesweepers, United States naval and air formations are conducting extensive sweeps over the Arctic seas north and northwest of Iceland.

They are keeping a sharp lookout for floating mines that were sown by both the Germans and the Allies during the war, and for icebergs. Both mines and icebergs are equally dangerous to navigation in the North Atlantic.

They are also searching for Soviet "weather parties," which are expected to attempt landings on the long shoreline of Greenland.

Alarmed by the recent "slip" of the Soviet Polar Institute, which announced "scientific" findings by Russian Arctic experts in Canada's Baffin area, the Anglo-American military authorities here do not want to risk allowing Russian meteorological or other expeditions to penetrate Greenland's vastness. Several such expeditions by the Germans inflicted incalculable damage to the Allied war strategy.

Reds Preparing to Breed Elk as Domestic Animals

MOSCOW, Dec. 17 (UP).—A farm to breed, domesticate and train elk is being built on the Pechersko-Ilichsk Preserve on the North Ural's frozen taiga. If the plan succeeds the Soviet Union expects within a few years to make up for the nearly 10,000,000 horses destroyed during the war.

Zoologists in charge of the project point out that the taiga, which tapers off into the barren tundra, is suitable neither for horses nor reindeer. Thousands of taigans who never have had a pack and draft animal would benefit. Other elk farms will be established if this one works out, one zoologist said.

He said domesticating elk is not a new idea. Russians rode them for sport before the days of Peter the Great. He said they are surefooted, sturdy enough to carry large loads, and adaptable to the coldest climates.

Russian Seal Catch 750,000

LONDON (ONA)—Russian hunters in the northern seas have bagged 750,000 seals and walruses this year and supplied to Russia large quantities of seal oil, as well as half a million square meters of furs, according to the Soviet Monitor. Many ships and seaplanes are participating in the hunting. The Soviet Union plans to build sixty-five new hunting stations next year and to erect processing centers along the Arctic coast.

'Cold Pole,' 94 Below, Discovered in Siberia

LONDON Dec. 16 (AP).—The Moscow radio reported today that geographers have found a "world pole of cold"—a spot where the temperature fell to a record 94 degrees below zero—in a hitherto unexplored mountain section of Siberia.

The broadcast said the place lies 63 degrees north and 143 degrees east in northeastern Siberia between the Sea of Okhotsk and the Arctic Ocean.

SOVIET WILL RESTORE SPITSBERGEN MINES

LONDON (ONA) — Large-scale restoration of the coal-mining facilities of the Spitsbergen Islands will begin soon, according to the Soviet Monitor published here.

A group of coal-mining constructors and prospectors has left Leningrad for Spitsbergen, where the Germans not only destroyed the mines but also leveled the settlements of Barentsburg and Grumant. [In September, 1941, British Commandos raided Spitsbergen, blowing up oil tanks, destroying wireless installations and evacuating most of the Norwegian inhabitants. The status of the islands remains in dispute today. Before World War II Norway gave the Soviet Union important mining concessions there.]

Another expedition to Spitsbergen will leave soon from Murmansk, taking 16,000 tons of building materials and food for the miners of the islands. Restoration of the mines belonging to Russia is expected by the end of next year.

Soviet Builds Northern Ports

LONDON (ONA) — The Soviet Union has built fifty new ports on rivers in Northern European Russia and Siberia since the end of the war, the Soviet Monitor reports. In the river shipping season, which has closed, there was a freight turnover of 20,000,000 tons. Five new river shipyards are under construction on the Volga, Dnieper and Siberian rivers.

RUSSIAN SCIENTISTS START ARCTIC TRIP

THE NEW YORK TIMES.

MOSCOW, July 9—The first of two groups of Russian scientists who will carry on experiments in the Russian Arctic took off from Archangel yesterday, Izvestia, the Government's newspaper, announced today.

The expedition will study the effect of the long polar night and extreme cold on employes at polar stations, ports and "enterprises" of the northern sea route administration, as well as other problems raised by continued exposure to severe weather conditions. The expedition was headed by Profs. I. A. Arnoldy and V. V. Yefromov and Assistant Prof. I. S. Kondror, all from the Institute of Central Hygiene of the Academy of Sciences of the U.S.S.R. Another scientific expedition is also being fitted out by the northern sea route administration for an investigation of the eastern sectors of the Russian Arctic.

Meanwhile the practice of employing demobilized Red Army soldiers to settle the frontiers continues. The Army's newspaper, the Red Star, recently emphasized the increasingly important part that veterans were playing in the settlement of the northern frontiers. It said today that veterans were taking up permanent residence in the maritime provinces of Siberia. Appeals for veterans to settle in the Primorye area have received an enthusiastic response, according to the newspapers, and demobilized soldiers are found in every collective farm, mine, factory and construction site in the area.

SOVIET ARCTIC FLYING PLANS BIG INCREASE

THE NEW YORK TIMES.

MOSCOW, Dec. 3—The volume of freight carried by Soviet air lines in the far north will more than treble this winter when a new air route will go north of the Arctic Circle.

An article in the newspaper Trud today emphasizes the growing importance of the Arctic and sub-Arctic to the Soviet Union. Trud said that the new service in the Archangel district carried thousands of passengers this year and that hundreds of tons of freight had been carried to Arctic settlements.

Izvestia announced recently that scientists had flown from Archangel to the Arctic and that the Northern Sea Route Administration was investigating "eastern sectors of the Arctic."

More than 3,000 collective farms have been organized in Arctic areas, stretching from Murmansk to Kamchatka. The record for the most northern vegetable garden is held by the Dolgan tribe which raises radishes at seventy-one degrees north latitude during July.

Although several other coal deposits have been discovered north of the Arctic circle the Pechora coal basin remains the most important. The basin's output is rising steadily because of the introduction of new machinery since the end of the war.

OXYGEN NEEDS RISE IN ARCTIC FLYING

Medical Aspects of Aries Expedition Over Magnetic Pole Are Reported

The importance of oxygen on airplane flights in Arctic regions has been emphasized in a report on the notable expedition of the British Lancaster bomber Aries to the North Geographical and Magnetic Poles. It was on that trip that the observation was made, and later verified by Col. Clarence S. Irvine of the United States Air Force in his flight in the Pacusan Dreamboat, that the Magnetic Pole appeared to be several hundred miles from the generally accepted position.

The medical aspects of the Aries flights have been explained by Wing Comdr. R. Winfield of the RAF in a paper to the Royal Geographical Society of London. Few changes were made in the bomber to equip it for the Arctic trip as the need for space and lifting capacity precluded the carrying of equipment that might have provided more comfort for the crew. Commander Winfield says, however, all precautions were taken in case of emergency landings and a large quantity of dehydrated food was carried. It was in the matter of fatigue under the grueling conditions, that he gave considerable attention.

Crew's Behavior Observed

"In the air I took special care to note any alteration in the behavior of the crew which might indicate the onset of fatigue," the medical officer reported. "I then attempted to discover what points in aircraft design, choice of equipment and planning of the flight contributed to this.

"It was obvious that fatigue would have been very much reduced if the flight had been made in an aircraft specially designed for Polar flying, instead of in a standard heavy bomber merely modified for the purpose. One of the more important of these modifications was an increase in the oxygen supply of the aircraft, carried in forty-five oxygen bottles with a capacity of 750 liters each. It was noticeable that on these very long flights the onset of fatigue could be delayed by breathing oxygen even at altitudes just below 10,000 feet.

Cold Adds to Oxygen Needs

"It was also evident that when flying at oxygen heights more oxygen was required if the subject was exposed to extreme cold. Cabin heating kept the cockpit at a reasonable temperature, but the fuselage was unheated as it is not normally occupied in the standard bomber. The observers working here experienced severe cold. Their efficiency was reduced both by the fall in body temperature and by the extra exertion and discomfort caused by wearing bulky clothing. It was impossible for them to wear electrically heated suits because the current was not available, as the aircraft generators were already taxed to their full capacity.

"It was interesting to observe that sleepiness was not a predominant sign of fatigue, although on the flight to the North Geographical Pole some of the crew were without sleep for fifty-six hours. The flight lasted for just under twenty hours and was preceded by a period of furious activity while the necessary preparations were being completed. This unusual wakefulness was probably the result of a combination of circumstances: the incentive of making new discoveries and the loss of a sense of time caused by the perpetual daylight played their part. It is easy to understand that the absence of darkness coupled with the dazzling brightness of sun and sky should add to fatigue without increasing sleepiness."

There were eleven members in the crew, and when the cold got unbearable in the after part of the bomber, the members exchanged places with those in the warm cockpit for a while. The emergency food carried for the men would have supplied 3,500 calories a day for forty days for each person.

Ten-mile Hike At 70 Below

DAWSON, Y.T., Dec. 18—(C.P.)—Have you ever hiked 10 miles in 70-below-zero weather? Yukon pioneer Mike Winage did and admitted "Brother, it was grim.

Winage has a wood camp 10 miles from this Yukon centre and when the mercury suddenly plunged downward late last week, he felt he had to make the hike into town to "size up" the town's critical fuel situation.

Recounting the trip, he gave this advice to would-be 70-below hikers:

"You keep moving . . . if possible you refrain from touching anything out-of-doors because it will pull the flesh right off you. You breathe slowly. You've got to. That frost in your lungs makes you dizzy and lightheaded in a few minutes if you gulp it into your system."

Eskimo Food Resources Wane, Depopulation Seen

Doctor Ends 6,000-Mile Survey, Says Hunters Create Scarcity

OTTAWA, Oct. 7 (CP).—Eskimos are depleting their food resources, and unless action is taken to protect them the Eskimo population will be seriously reduced, Dr. R. S. C. Corrigan said today on his return from a 6,000-mile medical service trip which took him as far as Ungava Bay.

Dr. Corrigan, who made the trip for the Canadian Health Department via the Hudson's Bay trader Nascopie, Newfoundland schooners and United States Air Force and Royal Canadian Air Force planes, said that with high-powered rifles and well equipped boats the Eskimo has become a more effective hunter, and he is shooting everything as he goes.

In some parts there are practically no caribou left, and walrus and seals are becoming scarce.

New Tablets Replace Army's Canned Heat

By Science Service.

WASHINGTON, Oct. 31.—New trioxane heat tablets for soldiers will be tested this winter in operations in Alaska and the Aleutians. Quartermaster Corps tests have shown the new tablet burns without odors or poisonous gases and produces a steady blue flame which is not easily extinguished by wind.

During World War II both paraffin and alcohol heating tablets were used, but both proved unsatisfactory. The paraffin burned with a bright flame visible for some distance and deposited soot on the container. Alcohol heating, the Army simply states, "has been eliminated as not possessing the necessary characteristics for military use."

Hexamine tablets, also used in the war, will be tested further in Alaska, but these units are more sensitive to moisture, burn brightly and produce some poisonous gases.

The new trioxane tablets are approximately 3 inches long, 1¼ inches wide and 5/16th of an inch thick, producing enough heat to raise the temperature of a pound of water 100 degrees Fahrenheit. The tablets come packed in a sheet of cellulose acetate laminated to aluminum foil.

Dry Cells for Cold Climates Developed

By Science Service.

WASHINGTON, Nov. 29.—Low-temperature electric dry cells, developed during the war to meet the requirements of Arctic climates by the National Bureau of Standards, will find many uses in all cold countries. Prewar dry cells were of little use at temperatures below zero.

The new cells, of two different types, will give acceptable electric output at temperatures of 22 degrees Fahrenheit below zero and lower, and are operative at minus 40 degrees. Dry cells of the ordinary ammonium chloride type become inoperative at about four degrees below zero.

One of the new cells is designated as the methylamine hydrochloride - ammonium chloride type. The other is a calcium chloride-ammonium chloride type. The second has given outstanding performances and, at present, seems to be superior to the methylamine hydrochloride type.

Details of the two new cells were given the Electrochemical Society by the three men responsible for their development. They are Earl Otto and George W. Vinal of the National Bureau of Standards and C. K. Morehouse, who is now at the Massachusetts Institute of Technology.

More Weather Posts Needed

TORONTO, Dec. 18—(C.P.)—Expansion of a chain of weather stations around the Arctic's rim would enable Canadian weathermen to tell with a high degree of accuracy when a big storm is about to roll down over the northern half of this continent, Andrew Thomson, Canada's new controller of meteorological services, said yesterday in an interview.

Currently only six stations chart weather in the Arctic. Within three years they will number 16. But Mr. Thomson said 26 are needed for an adequate report.

Such a network would help determine what conditions affect flying in the Arctic and if trans-Polar flights can be made safely and regularly.

So few weather stations spot the polar expanses at present that meteorologists call the Canadian-United States sector of the Arctic north of 66 degrees north latitude the "blind spot." It covers 500,000 square miles.

The six stations now watching the weather in that vast region, compare with 164 in an equivalent area extending north, east and west from Toronto. Facing the six Canadian-American stations north of 66 degrees are more than 200 stations in the European-Asiatic segment. Half of the 200 are in Russia.

To forecasters, the "blind spot" is of vital importance because that is where most of North America's most paralyzing storms are born, Mr. Thomson said. Cold Polar air piles up there, seethes for a day or two and then heads south to chill millions of Canadians and Americans and possibly cause death, damage and disruption of communications.

Arctic Group Given Grants

MONTREAL, Nov. 23

A list of grants to the Arctic Institute of North America to encourage and facilitate scientific investigations in the north and to expand the organization's library, map collection and other research facilities was announced today by the board of governors of the institute.

Two $5,000 grants were acknowledged from the Canadian War Technical and Scientific Development Committee, Ottawa, and the Hudson's Bay Company, Winnipeg.

Other donors and their contributions were listed as follows: Canadian Pacific Railway, Montreal, $2,500; Imperial Oil, Ltd, Toronto, $2,500; Consolidated Mining and Smelting Co. of Canada, Ltd., $2,500; National Research Council of Canada, Ottawa, $1,200; National Research Council of the United States, Washington, $1,200; W. V. Baldwin, Springfield, Mass., $1,000; Miss Louise A. Boyd, San Francisco, Calif., wild phototheodolite for use of field parties; Prof. George H. T. Kimble, McGill University, set of geographical handbooks; Dr. Lauge Koch, Copenhagen, Denmark, set of scientific reports on Greenland; McGill University library, set of books on the polar regions; D. A. Nichols, Sorrento, B.C., photographs and Eskimo and Indian handicrafts.

ARMY TESTING USE OF HEAVING TUNDRA

Studies Frozen Alaskan Land Which Contorts Buildings as Warmth Causes Thaw

By WALTER S. SULLIVAN
THE NEW YORK TIMES.

FAIRBANKS, Alaska, Oct. 10 (Delayed)—Army engineers on the outskirts of this city have for the first time undertaken a systematic investigation into the characteristics of permafrost.

During the war permafrost, permanently frozen ground that underlies most of the northern regions, proved an unpredictable force that could buckle airfield runways and contort the strongest buildings beyond repair.

Now that extensive development of the Alaskan interior is under discussion, reliable information on permafrost is essential before buildings, bridges, railroads, highways and factories can be built with reasonable prospect of enduring.

One-fifth of the land surface of the earth is believed to be underlain with permafrost. The ground is frozen in midsummer from a few feet below the surface to depths as great as 1,200 feet at Amderma, on the north coast of Siberia. In Fairbanks the ground is generally frozen to a depth of 170 feet.

Whenever anything is built on permafrost that causes part of it to thaw, irregular settling results. Thus, when the Army built a large garage at Northway, southeast of here, the heat of the building melted the ground ice deeper than the normal summer thaw. The concrete floor began to sink. A hole was drilled in the center of the floor and liquid concrete was forced through, lifting it back up. Three times it sank and three times it was "mudjacked" up again. Now the center of the floor is still a foot below the sides.

Can Exert Powerful Stress

The weight or strength of a building or bridge pier is of small consequence when pitted against permafrost, which can exert a stress of fourteen tons per square inch.

Army engineers here recognize two solutions to the problem. One is to build where there is no chance of permafrost-heaving. Riverside gravel bars provide such a site, but that would limit construction and involve danger of flooding.

The other alternative is to build on permafrost and insure that it remains a solid foundation by insulating it against thawing. The mission of the research project outside this city is to determine the most effective means of such insulation.

Under the direction of Maj. H. J. Manger, CE, of Minneapolis, eight small heated buildings with varying types of foundations are being built, and underneath them tiny wells containing thermometers have been sunk into the permafrost.

One house has seventeen such wells beneath it and beneath the ground around it. The center well goes down thirty feet. Each well contains a number of thermometers at varying depths which can be read electrically from the surface.

Samples of asphalt runway surface, concrete slabs painted black, white and unpainted, gravel beds of depths varying from two to twelve feet have all been laid out on the ground to test their effect as insulators between surface weather and the frozen depths.

Layers of tundra moss and of spruce logs are being tried since in the natural state they insulate the permafrost against thawing. Artificial insulators, which help keep homes warm, will be keeping the ground cold outside Fairbanks next summer; for foam-glass, zonolite and a Danish insulator called cell concrete are all being tried out. The effect of all these samples is determined by temperature wells.

Some indication of the amount of insulation necessary is shown by the experience of the Alaska Road Commission. According to Frank Nash, superintendent of the Fairbanks District of the commission, the accepted road-building technique throughout the permafrost country is to bulldoze uprooted stumps, logs, branches, moss and tundra sod onto the right of way, then pile three feet of gravel on top.

This is suffiicent to protect the underground frost along hundreds of miles of highway, according to Mr. Nash, but it is by no means foolproof. The sand and gravel usually form a tight crust, but sometimes that crust breaks open and summer air leaks through the tundra debris down to the ground ice.

The first sign is an eruption of muck that oozes from one spot in the road and spreads for yards in all directions. Then that section of the road begins to sink. It may go down anywhere two inches to two feet, according to Mr. Nash, making an effective trap for any unfortunate vehicle that happens along.

Most of what the Army knows about permafrost was learned from the Russians, who embarked on a concentrated study of the problem in 1930. Almost half of the Soviet Union rests on permanently frozen ground, and before Government agencies or cooperatives can put up a building in that area they are required to survey permafrost conditions according to a prescribed plan.

The manual used by the United States Army engineers is largely based on the published works of Russian researchers, although it also cites a few Americans and Scandinavians who have studied the phenomenon in their own subarctic regions.

U. S. Searches in Alaska For Uranium, Oil, Coal

WASHINGTON, Dec. 18 (AP)—The Interior Department disclosed today that it is making a thorough geological search to determine whether Alaska may be a source of uranium, the basic material for atomic energy and the atom bomb.

Also under survey are Alaska's potentialities in oil, coal, gold, and radium, and means of coping with the construction problems provided by volcanic activity and permafrost — the permanently frozen ground which underlies the territory.

The Department's geological survey said in a report to Secretary I. A. Krug that 56 geologists took part in a summer-long field study which covered a wide range. Laboratory analyses of their finds will continue through the winter.

Underlining the importance attached to the survey, the report said the areas studied and the total number of men employed are being withheld "for security reasons." It gave no hint whether the field workers discovered uranium in worth-while quantities.

John C. Reed, special assistant to Survey Director W. E. Wrather, told a reporter the main purpose of the explorations is to pinpoint underground resources, particularly those of which supplies were expended in huge quantities during the war.

The Interior Department also hopes to break the grip of gold on Alaska's economy by opening up other sources of natural wealth.

An understanding of how to deal with permafrost is vital in any Alaska construction program of the future, Mr. Reed said. He explained:

"The permafrost study at first glance might appear to be a case of locking the barn door after the horse has been stolen.

"Ignorance of permafrost conditions cost the United States millions of dollars during the war. There was a terrific amount of waste in the maintenance of the Canol pipe line and the Alaska highway, and of such airfields as Nome, Galena, and Northway, due to disregard of the problem of frozen ground.

"Permafrost study is a subscience, and the Russians are advanced in it far beyond the Americans and Canadians."

The United States could have saved "millions of dollars" in wartime if it had possessed the Russian permafrost "know-how," the survey report commented.

Krug Crosses Arctic Circle on Plane Tour

Barrow, Alaska, Aug. 14 (Delayed).—Secretary of the Interior J. A. Krug today became the first member of a United States Cabinet to enter the Arctic Circle.

Accompanied by Alaska's Governor, Ernest Gruening, Interior Department aids and administrative experts of the Alaskan Congress touring the territory to lay the foundation of a new deal for Alaska, Krug, in his four-engined DC-4, flew 300 miles into the Arctic in brilliant sunshine which made a blazing mirror of the vast ice-covered tundra.

Secretary Krug

Drawn up on the littered beach at this northernmost point of the American continent, the 500 Eskimos, and Navy and Air Forces personnel who comprise the 800 population of Barrow, cheered to celebrate the outstanding event in this area since the Summer of 1935 when Wiley Post and Will Rogers crashed to their deaths some 10 miles west of here.

A company of Eskimo troops presented arms as Krug stepped from his plane and a cheer went up from the banked rows of parka-clad natives, headed by their leader, Fred Ipalock, who lined the Arctic Ocean water front.

In the background bashful oldsters and frolicking children swarmed around dreary, mud-circled tents and grinned.

The visitors were welcomed at an Eskimo banquet in the local schoolroom. The menu offered barbecued caribou, roast arctic goose, fish fried in seal oil, fried seal liver, fried breast of ptmarmigan, candied whale meat, braised cheek of bearded seal, polar bear steaks, pickled walrus meat, roast walrus heart and grilled heart of reindeer.

Outside a wide window fronting the dining hall, natives performed tribal dances, and 30 men, heaving a great reindeer skin, tossed lads and lassies high into the air. The windows were festooned with the faces of grinning urchins.

After inspecting installations, hearing native grievances and promising the Eskimos a constructive program of house building and medical care, Krug took off on the next leg of his tour, to Nome.

New Map of Alaska Ready

WASHINGTON (AP)—The Geological Survey has completed the first up-to-date map of Alaska. Secretary of Interior Krug said he expected the map to be of great value in his plans for a post-war development of the territory. Compiled from data obtained by ground surveys and aerial photographs, the map shows the locations of all mountain ranges, streams, geographical boundaries, settlements, roads, railroads, coastlines, islands and lakes.

Reindeer From Siberia

The domestic reindeer was introduced into North America from Siberia via Alaska in 1891.

B-29 MAKES CAIRO AFTER ARCTIC TRIP

Irvine, Passing London in Night Fog, Reports Plane Bested Snow, Gales in Far North

By The United Press.

CAIRO, Egypt, Sunday, Oct. 6—The Army Superfortress Pacusan Dreamboat landed here today at 9:54 A. M., Egypt time (2:54 A. M., Eastern standard time), after a 9,500-mile non-stop flight over the top of the world from Hawaii in which it crossed over two continents and landed on a third.

Its fuel reserve cut to the "danger point" and its ten-man crew exhausted, the Dreamboat touched the runway at Payne Field after 39 hours and 33 minutes of flying over the Pacific, the towering mountains of Alaska and Canada, the ice caps of the Arctic, the cities and mountains of Europe, and the Mediterranean.

Although it did not match the 11,236-mile distance mark set by the Navy's Truculent Turtle in a hop from Australia to Columbus, Ohio, last week, the Dreamboat proved the feasibility of military flights over the top of the world and gave the Air Forces valuable information on flying conditions encountered atop the world.

Colonel Irvine and most of the members of his crew of nine, in taking off Friday at 5:51 A. M., Hawaii time (11:21 A. M., EST), had estimated they would reach Cairo in about forty-one hours.

The plane weighed seventy-four tons at take-off but grew lighter every minute as its four hungry engines gulped the 77,352 pounds of gasoline it lifted from the Hawaiian airfield.

Flies High Over Arctic Storms

The plane without hitch cleared the Pacific near Sitka, Alaska, at 4 A. M. GMT (11 P. M., Friday, EST.) Her pilot lifted her from the 1,000 feet at which she had crossed the first ocean to around 15,000 to clear the southeast Alaskan peaks and the Yukon mountains.

The plane apparently retained the high altitude to avoid severe Arctic storms. It passed near the North Magnetic Pole at about 7 A. M., GMT (2 A. M., EST) and next was heard from over near the dead center of Baffin Bay, which separates northeast Canada from Greenland.

WASHINGTON, Oct. 5 (AP)—Roaring along at a steady 253 miles an hour, the Army's Pacusan Dreamboat passed near Coppermine, about 965 miles northeast of Juneau, Alaska, at 3 A. M., EST, the Army Air Forces reported here this morning. Coppermine is in Canada's Northwest Territory, on Coronation Gulf.

Col. C. S. Irvine, the pilot

Interference of the aurora borealis with radio transmission was severe at the time, and a temporary "blackout" had been expected while the plane was passing through the Arctic.

A 7:30 A. M. report said the Dreamboat was flying at an altitude of 15,000 feet. In a relayed broadcast received here, the Dreamboat crew reported "all okay."

The plane's position at 7:30 A. M. was given as Lat. 71 degrees N., Long. 60 degrees W., which Air Forces officials said would place it almost over the center of Baffin Bay.

After a period of radio silence, the Army Air Forces said the plane reported it was over Meeks Field near Reyjavik, Iceland, at 12:16 P. M. at 20,000 feet. The weather appeared good for the next leg and the crew expected to next leg and the plane picked up tail winds.

Location of North Magnetic Pole A Major Finding by Dreamboat

The New York Times.

CAIRO, Egypt, Oct. 6—The Hawaii-to-Egypt flight of the Superfortress Pacusan Dreamboat undoubtedly made many contributions to science and to aviation in general; and one of the most notable was the evidence that the North Magnetic Pole is at least 200 miles farther north than the position as shown on maps.

Col. C. S. Irvine, commander of the United States plane, reported today that when the B-29 reached the area where the Magnetic Pole was supposed to be, the compass needle still pointed north.

His navigators' calculations at the time placed the Magnetic Pole 200 miles away. Ordinary magnetic compasses in the region were useless. They just spun.

The thing that took the Dreamboat through was a little six-pound electric gyro compass. Others were like broken toys and proved so annoying that they finally were covered.

Colonel Irvine said that the area in which regular compasses fail is from a point about 200 miles inland from Sitka, Alaska—the vicinity of Whitehorse, Yukon—to Greenland.

Irvine's Statement of Check-Up

CAIRO, Oct. 6 (AP) — Colonel Irvine said today in reporting his scientific findings:

"Apparently the North Magnetic Pole is about 200 miles closer to the North Pole than was previously believed. We passed north of the point believed to be the Magnetic North Pole deliberately to check its apparent location and its effects on magnetic compasses. In the position we crossed, our magnetic compasses pointed left toward the North Pole."

Major N. P. Hays of Seneca, Mo., one of the Dreamboat's two navigators, guided the plane in that critical stretch by the gyro compass. The plane at the time flew over undercast and beneath high clouds that made both the ground and the heavens invisible.

Colonel Irvine said the flight proved that communications could be carried on from plane to plane and from plane to ground in the Arctic regions and that aircraft could navigate in the Arctic with highly qualified personnel.

British Supported

The New York Times.

LONDON, Oct. 6—The observation of an error of at least 200 miles in the charted position of the North Magnetic Pole made by the Pacusan Dreamboat affords further confirmation for the calculations of the British Astronomer Royal, Sir Harold Spencer Jones, it was noted here today.

Sir Harold found through mathematical analysis of reliable observations of the earth's magnetic field that the North Magnetic Pole is 250 to 300 miles north of the hitherto generally accepted position off the Canadian Arctic coast. That position had been charted on the basis of observations of the Amundsen and Ross explorations.

First confirmation for Sir Harold's calculations was provided by a report from the commander of the Royal Air Force research Lancaster, the Aries, which was the first plane to fly over the actual location of the magnetic pole in May, 1945. The Aries leader, Wing Comdr. D. C. McKinley, reported "spotting" the magnetic center in the Sverdrup Islands.

POLE SHIFT CONFIRMED

Nearer to North Pole Than Was Thought, Canadian Reports

OTTAWA, Oct. 19 (AP)—R. G. Madill of the Dominion Observatory said today that on-the-spot observations by Canadian scientists had established that the North Magnetic Pole was 200 miles North and East of its previously announced position.

This finding supported Col. C. S. Irvine, commander of the B-29 Pacusan Dreamboat, who reported Oct. 6 that "apparently the magnetic north pole is about 200 miles closer to the North Pole than was previously believed." The United States Army plane passed near by on its Hawaii-Egypt flight.

Mr. Madill said the observatory's finding differed radically from that of Royal Air Forces observers, who announced in 1945 that the pole had shifted 400 miles to the North and West.

Mr. Madill reported that the magnetic pole now was 85 miles north of the isolated Hudson Bay post, Fort Ross, on the southern part of Somerset Island. This is almost due north of Winnipeg. The previously accepted position, determined by the explorer Ronald Amundsen in 1904, was on the Boothia Peninsula, and the new findings would indicate the pole hal drifted 200 miles in forty-two years.

AIR BASES FEASIBLE ON ARCTIC ICE MASS

General Anderson Says AAF Could Maintain Fighter Planes in Polar Areas

Engineers have advised the Army Air Forces that air bases capable of accommodating at least fighter aircraft can be successfully constructed on the ice masses of the Arctic, Maj. Gen. Orvil A. Anderson, commander of the Air War College, Maxwell Field, Ala., disclosed in an interview Dec. 19

General Anderson, in an hour-long discussion at his suite in the Henry Hudson Hotel, discussed some phases of the AAF's strategic pre-occupation with the Arctic areas and declared that a "realistic" globe must include Arctic air-power planning.

Discussing the range capabilities of the United States' latest type bombers, such as the B-36, which has a 10,000-mile range with a fifty-ton bomb load, General Anderson pointed out that "air power, by the very nature of its base requirements, gravitates toward land masses or solid surface masses."

"We must have advance bases within the range of all types of aircraft," he asserted. "The polar region has surface conditions that provide, in terms of economy, for decisive airpower."

General Anderson is in New York as the guest of the polar subcommittee of the Institute of Navigation.

"The potential foes we see today are on the other side of the Arctic," he said. "In planning for future wars, particularly in the air, we must have a planned strategy pointed and timed for specific operations."

General Anderson emphasized that there is no such thing as a mythical foe, only "potential foes." Because military weapons are so costly, he added on this point, they cannot be bought for general purposes but must have a specific known application in terms of distance, weather and opposition.

At present, he said, the AAF must still consider the necessity of fighter escort for its bombers. This, he said, accounts for the polar studies. Planes could land and take off on ice, he declared, once steel landing mats had been placed on the surfaee.

The AAF, General Anderson told interviewers, in seeking a "realistic" strategic globe, has become convinced of the coming of age of "air logistics." He cited as an example a study which showed that a fighter aircraft with a fifty-mission combat lifetime could be maintained at one-third the expense incurred using surface transportation by feeding its technical requirements forward to advanced bases by air.

"The polar regions," he announced, "would be exploited both by us and a foe—if we developed one."

B-29 Ends 5,000-Mile Hop To North Geographic Pole

By The Associated Press.

EDMONTON, Alberta, July 16 —A B-29 Superfortress Loran-equipped and with a pressurized cabin, recently made a flight of more than 5,000 miles from Edmonton over the North Geographic Pole and back, the first such flight in history originating on Canadian soil, it was learned today.

It was believed that the flight, by way of Fairbanks, Alaska, was made for instrument-testing purposes, particularly the Loran device, which is similar to radar, and to gather data on weather conditions in the Polar regions.

The B-29 was one of three Loran monitoring aircraft that have been based in Edmonton for some time. Carrying a crew of twelve, the plane stopped at Fairbanks for refueling and then went over the Pole and returned to Fairbanks in approximately twenty-three hours. Later the B-29 returned to its base here.

The flight was made at about 30,000 feet over the flat terrain of the polar ice cap without incident.

LOST ARCTIC ISLES FOUND

Spicer Group Rediscovered by Canadian Survey

OTTAWA, Sept. 10—A Canadian air-borne expedition to the Arctic has rediscovered the Spicer Islands and a number of hitherto unknown islands under the eaves of the continent.

The Spicer Islands were discovered in 1897 by Captain Spicer of New Bedford. They were duly marked on maps and charts but had never since been found and there was doubt of their existence.

Canadian geodetic surveyors flew over the Arctic lands and seas this summer, using two Canso and two Norseman planes. One Norseman had to be abandoned for engine trouble, but its crew and scientists were brought out safely.

The Spicer Islands were found in the middle of Foxe Basin; one is eleven and th other seven miles long.

Bryan to Head Navigation School

Scranton, Pa., July 22.—Rear Admiral G. S. Bryan, United States Navy, retired, has joined the faculty of International Correspondence Schools as director of the school of navigation, Samuel Baker, dean of the I. C. S. Schools of Technology, announced today.

For the last seven and a half years, except for a brief retirement shortly before Pearl Harbor, Bryan has headed the Hydrographic Office of the Navy Department, which supplies navigation manuals, tables and charts to the fleet. For his work Bryan was awarded the Legion of Merit.

Huge Dirigibles Proposed for Polar Surveys

8 Rigid Aircraft Would Be Built for Navy; Army Says Ice Could Hold Air Bases

A Navy proposal to build eight huge dirigibles, each with a volume of 10,000,000 cubic feet of helium gas, to be used in exploration and survey work in the polar regions, was disclosed Dec. 19 in a report to the International Symposium on Polar Navigation held at the Hayden Planitarium.

Commander Andrew D. Jackson jr., naval navigator of Newport, R. I., presented the report to the symposium, which is sponsored by the Institute of Navigation. Rear Admiral T. G. W. Settle, in charge of all naval lighter-than-air training and experimentation; Commander William J. Catlett jr., navigator, and W. J. Dimitrijenic, naval meteorologist, furnished technical data. The last existing naval rigid airship or dirigible, the Los Angeles, was dismantled at Lakehurst, N. J., in 1940 for old age after nearly eighteen years of service, and during the war the Navy operated only non-rigid blimps.

The largest existing Navy blimp, Mighty Mike, which has a capacity of 725,000 cubic feet of helium, recently set a record for continuous flight by cruising for more than a week without refueling.

Major General Orvil A. Anderson, chief of the Air War College at Maxwell Field, Ala., disclosed Dec. 19 in a speech at the annual dinner of the institute, that it now was possible to establish air bases on the solid ice of the Arctic regions. General Anderson, who was deputy commander for operations of the 8th Air Force during the war, said that the Arctic had become the most vital region on the earth in terms of strategy.

Commander Jackson's report said that although all agencies agreed commercial flights through and across the North Polar area were potentially attractive and economical the area still was uncharted and unseurveyed. He said that an exploration by airships flying the polar area and remaining three or four weeks to conduct complete research "is practical, can be done and should be done."

"The area north of 75 degrees north latitude is a natural for airship operations," Commander Jackson reported. "First, the Arctic air mass is not an area of high turbulence. Secondly, cold weather operations increase the efficiency of lighter-than-air by a ratio of roughly one per cent lift for each 5 degree decrease in air temperature.

"Thirdly, lighter-than-air ships possess an enormous reserve source of electric and electronic power; have a flexible speed range, tremendous cruising range, load-carrying capacity and flight endurance."

The report estimated that the cost of eight dirigibles would be about $50.000,000.

SHIRASE OF JAPAN, SOUGHT SOUTH POLE

Explorer Who Twice Reached 80 Degrees South Dies—Lack of Preparations Hindered

NAGOYA, Japan, Sept. 10 (U.P.)—Naoshi Shirase, Japan's leading explorer, died today at the age of 86.

Lieutenant Shirase, a retired cavalry officer, made two journeys toward the South Pole, hoping to bring the honor of its discovery to Japan. The trip that began in the autumn of 1910 reached 80 deg., 5 min. The second effort—a year later—advanced little, if at all, further, according to a brief dispatch he sent to THE NEW YORK TIMES on his return to New Zealand in March, 1912. Amundsen discovered the South Pole on Dec. 14, 1911. Scott reached it on Jan. 18, 1912.

The Shirase expeditions were poorly equipped and lacked funds, there being little official or general public support for the ventures in Japan. Their leader believed he could overcome these handicaps by unlimited enthusiasm, and devotion to the Emperor. The Antarctic refuted him.

Earlier explorations of Shirase took him to the Northern Kurile Islands and to Point Barrow, Alaska.

Tiny Boat Ends Arctic Patrol

Vancouver, Sept. 28 —C.P.)—Another long hazardous venture into the Arctic by the 80-ton Vancouver - built Royal Canadian Mounted Police patrol boat St. Roch ended Thursday afternoon when the little ship slipped quietly into Vancouver harbor.

At the helm was Sub-Inspector Henry Larsen of Victoria, who told newsmen "we didn't bust any records this time. It wasn't that kind of a trip. Just nice and peaceful."

The skipper said the tiny supply schooner had one close squeak. At Point Barrow, on Alaska's northernmost tip, it just missed being blocked in for another winter. "The ice closed in behind us one hour after our departure."

Last lap of the voyage was 5,000 miles from Cambridge Bay, where the ship had been frozen in from September, 1945, until July this year, and it took 26 days.

In 1944 the St. Roch sailed 7,300 miles from Halifax to Vancouver through the fabled northwest passage in 86 days. Previously, by a different route and travelling from Pacific to Atlantic, the St. Roch in 1942 completed a 10,000-mile voyage from Vancouver to Sydney, N.S., in 28 months, becoming the first vessel to navigate the northwest passage from west to east.

THE PRESIDENT CHARTING THE COURSE OF THE PACUSAN DREAMBOAT

Mr. Truman going over the route from Honolulu to Cairo taken by the record-breaking plane as the crew of the Superfortress looks on at the White House. Left to right: Sgt. Gordon S. Fish, Appleton, Wis.; R. B. Snodgrass, Seattle, Wash.; Sgt. Edward G. Vasse, Huntsville, Mo.; Maj. James T. Brothers, Knoxville, Tenn.; Lieut. Col. Frank L. Shannon, Philadelphia; the Chief Executive; Col. Clarence S. Irvine, St. Paul, Neb.; Lieut. Col. Beverly Warren, Omaha, Neb.; Maj. James R. Kerr, Arcadia, Calif.; Maj. Norman P. Hays, Seneca, Mo., and Maj. James R. Dale Jr., Wise, Va.

WAR BIRD IN THE ARCTIC—A Navy seaplane alights in icy waters on the joint United States-Canadian Arctic expedition to study the movement of iceberg packs and other navigational data. The planes flew within 450 miles of the North Pole.